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Resonance, a step towards a fluency for complexity: The science, language, and epistemology of Gregory Bateson

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Abstract

This thesis confronts the urgency with which new language and vocabulary is required to move beyond linear assumptions in mainstream science and humanities, as well as global policy-making. I examine Gregory Bateson's body of work in history and philosophy of science, psychiatry and psychotherapy, anthropology, biology and ecology designed to communicate the necessarily interdisciplinary consideration for a nonlinear and recursive investigation of the self, other, and environment. Such intellectual forays cannot dismissed as non-scientific. I offer definitions and contextualizations of key terms derived from cybernetics, new materialisms, and posthumanism (such as emergence, process, paradox, metaphor, fractality) to speak about the ramifying intricacies and pathologies in processes of knowing at various different scales. I conclude with a theory of resonance that may offer the epistemological groundwork with which to construct a metaphor of precarious intervention and to model a critical relationship between epistemology and ethics.

Keywords

Bateson, Communication, Cybernetics, Ecology, Epistemology, Metaphor, Paradox, Psychotherapy, Resonance

Summary for Lay Audience

The world that we know and participate in is moulded and edited according to *what* we believe about it, as well as *how* we think about such things. Our beliefs about ourselves, the others that we encounter, and the shared environments we occupy will determine the reality we live in, and such material contexts allow for these perception-determining beliefs to emerge in turn. I am developing a new way of thinking about thinking, which includes thinking about the nature of order and organization in living systems. The living systems in question are varied in form: one's network of ideas, a natural ecology, a collective social organization, an interpersonal relationship, or even a human body. I believe this meta-level task must be at the forefront of all scientific and theoretical inquiry, for science and theory must encounter their own potential for material repercussions. I believe that at a basic level, these disciplines can produce themselves in ways that do not harm or diminish the systemic nature of oneself or the world. But such ideas must be articulated through a radically new language rather than one of linear purpose and commodity value as valorized by late industrial capitalist society. This thesis introduces and elaborates upon certain aspects of the vocabulary used within scientific circles of the mid-to-late twentieth and twenty-first centuries (cybernetics, systems theory, psychoanalysis, new materialisms, posthumanism), bridged across each other with their shared desire to articulate the complexity, and perhaps indeed the beauty of their subject matter. I conclude with an entry of my own, the word and concept of 'resonance' which I propose as conducive to the ideas of systemic complexity in its open-ended and interdisciplinary usage.

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Last but not definitely not least, I dedicate this thesis to my father, who catalyzes my passions and thoughts with unwavering fervour and interest, and my mother, who is in my heart at all times.

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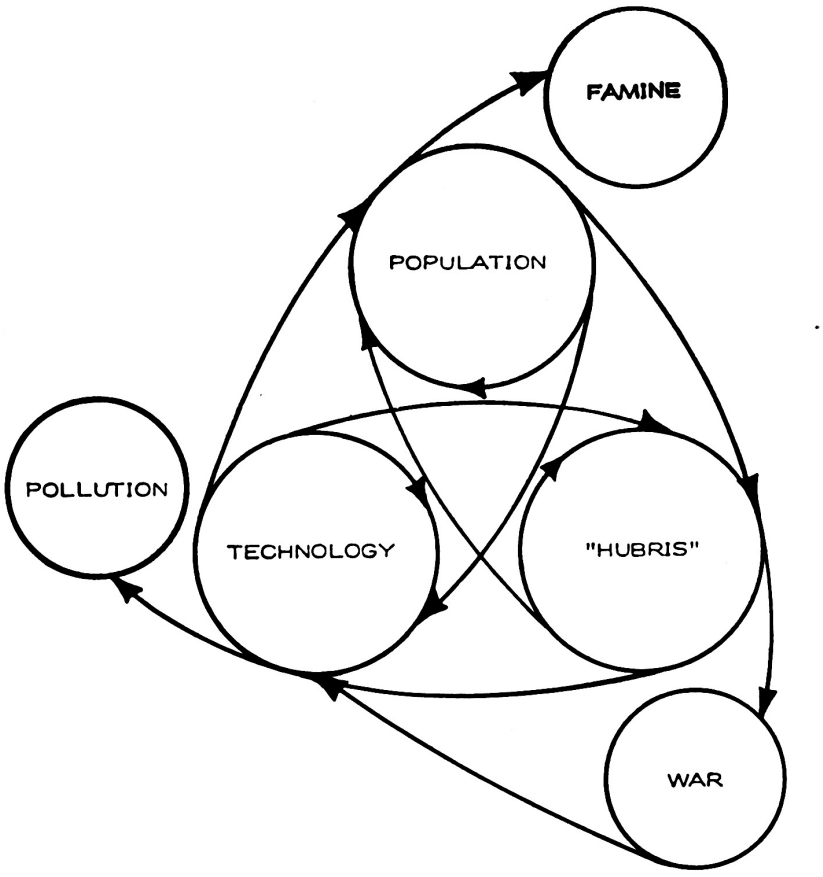

Fig. 1 The Dynamics of Ecological Crisis

Preface

The following chapters are an accumulation of my studies across literatures and disciplines that have offered the enthrall of yet unrecognized resonances between distinct people and ideas. This investigation began with Gregory Bateson and his prescient anticipation of where and how a new paradigm for recursive explanation and scalar complexity might emerge in science. My prolonged search for relevance and meaning is by its very nature ongoing, yet it is my hope that this thesis project has recorded the wild movement of one observer's search patterns as they emerge alongside and entwine with others.

The first chapter, "Epistemic Precarity and Processual E(mergence)," begins by outlining the problem of language, translation, and mutual understanding at the ground level of my inquiry into epistemological error and change in the fields of scientific investigation. I entwine Gregory Bateson's positing of epistemology as a meta-science in his later years with the concurrent and continuing work of Donna Haraway ("emergent naturecultures"), Isabelle Stengers ("emergence as ecology of practices"), Felix Guattari ("chaosmosis" and "ecosophy"), and Michel Serres ("the parasite") in the field of history and philosophy of science. Their respective concepts serve as conceptual models with which to recursively examine the nature of co-constitution and coevolution of ideas and biological forms. I believe the notion of emergence and its emphasis on process creates new and unexpected synergies with Bateson's key premises of metacommunication, the dynamics of ecological crisis, and cybernetic explanation.

The second chapter entitled "The Necessary Existence of Residues," continues to examine the communicational problem of intersubjective perception and knowledge by scrutinizing the pathologization of the "residual class" of the 'mentally ill' (*i.e.* the schizophrenic, the borderline, the alcoholic.) I elaborate Bateson's double-bind theory at length to explore its formal boundaries, and to approach its therapeutic potential as emergent within the patient-therapeutic relationship. At the interface of patient narratives and systematized theories of

psychotherapy is the utmost importance of the relationship that binds the patient to the potential for new realities, and the doctor to interruptions in their clinical belief systems. I draw heavily from renowned psychotherapist Frieda Fromm-Reichmann's primary clinical method of constructing therapeutic double-binds, as well as Henry Stack Sullivan, Erving Goffman, and Felix Guattari to explore notions of "interpersonality" (or lack thereof) in the phenomenological realities within the asylum. Furthermore, I rely on Michel Foucault's key premise of "psychiatric power" to scrutinize the violence of normativity and stigmatization, rooted in the very process of delineating the structures of communicational complexity within the psychiatric context. I conclude this chapter with an elaboration of Bateson's notion of "transcontextuality" that emerges precisely at the moment that the double-bind and psychotherapeutics is considered not as a specialized medical science, but as a field of studying communicational complexity and logical typing.

My final chapter "Searching for Resonance Amidst the Noise" curls inwards and returns to the central problem of mutual understanding in the construction of the particular epistemological presuppositions as informed by these various thinkers from a different vantage point. I explore the meaning of Bateson's famous and enigmatic (famously enigmatic?) phrase "the patterns that connect" to postulate the topology of 'resonance' in critical theoretical thinking in particular and 'mental process' (in the Batesonian sense) in general. I refer to Anthony Wilden's interdisciplinary continuation of Bateson's key cybernetic premises to elaborate the meaning and stakes of resonance as directly relevant to the economy of flexibility in our ideas in a given social system. I conclude with an experimental modelling of the theorist (the scientist, the patient, the polymath thinker) as an *observer-participant*, in which experiencing the complexity and beauty of chaos in living systems begins as a recursive process of recognizing those same qualities immanent in oneself. The process of observing, inspecting, and scrutinizing some external 'thing' in the world cannot be separated from the process of participating, witnessing, and recalibrating that immanent system one is constituted by.

I am indebted to Gregory Bateson's lifelong work from the basic level of structure, as I begin each chapter with a short "metalogue" in hopes to frame and introduce the central premises of each section. I am reluctant to determine the identities of each of the participating protagonists, precisely because I believe the strength of the metalogue form lies in its ability to not take a notion of (auto)biographical factuality very seriously. Nonetheless, these metalogues were written from a profoundly personal place, with frantic efforts not to let their potential resonances become confined to those that were intended by the author. That is the main promise of resonance after all—to become open towards and fluent in fascinating accidents, in the turbulence of unanticipated connections. This flexibility is embedded in Bateson's original description of a metalogue as a literary exercise on "some problematic subject," where a dialectical unfolding of distinct positions are presented, but are not fixed. The thoughts, logic, and language of the players evolve to adapt to the shifting context of their interaction; meaning, if it exists, must be embedded in the immanent dialogic or relational form itself. This is the 'meta' nature of the metalogue, for this form presupposes that higher orders of learning are determined not by the content but by the shape of the context in which the learning occurs.

Student, analysand, daughter; teacher, analyst, parent—the fact of participating in a natural progression of life anticipates an ongoing plurality in and concurrence of these potentials. I am not one but many, with so much depending on who else I am met with in relations of flexible reversibility. Within a metalogue, the participants on both sides of the dialogue realize that they are functions of their contexts, determined by it even when they are trying to resist it. And yet, something new still seems to be emerging out of their encounter with each other. They can (somewhat) coherently converse with one another about these matters, in spite of the fact that they are both essentially emanations or abstracts or parts of their very different social contexts. Perhaps this can be taken as a wider metaphor for the 'purpose' of my thesis project, which attempts to situate the theoretical findings of different thinkers regardless of discipline or historical/genealogical tradition as participating together in one resonating system. Furthermore, I believe this metaphor can extend to this academic context here right now, where we are sharing ideas in a space that may resonate close or far, that

might actively do harm or actually be helpful or be absolutely useless in the material world. It beckons us as academics to critically, thoroughly and ardently participate in the larger context of this present moment of chaos and crisis at political, social and ecological levels. It is my sincerest belief that every part of our premises and products must refer back to the living complexity of the world that we coinhabit with unknown others, and that begins with an explicit recognition and involvement of our relations with each other across the arguably arbitrary boundaries of specialized fields of study. I can only hope that my tripartite search for a new paradigm may allow for the resonances necessary for such inward-looking mobilization and change.

1. Epistemic Precarity and Processual E(mergence)

« *Metalogue: Who am I to you? Who are you to me?* »

Student: Do you see what I mean?

Teacher: What do you mean?

S: Never mind.

T: Are you asking if I can 'see' exactly how you 'think'? How I evaluate the messages you intend to give me will always remain on my side of a gulf between us. I am inclined to think that neither of us are particularly interested in elaborating our differences for the sake of reinforcing their antagonisms or irreversibilities. Maybe your question can lead to an interchange right now, right here—not about the 'things' we talk about, but the additional messages that are embedded in those messages about what is going on between us.

S: We all seem to go about our lives mired in miscommunication and distorted relationships, in the academic dungeon we both occupy and at every instance of our respective everyday lives. You taught me about the importance of precision in my usage of words, of instantiating communicative nodes at larger (higher?) scales of communication *about* communication to form bridges between differences. This bridging does not always lead to agreement, but may begin as a process of finding some sort of common-ground. Yet I am left profoundly confused and frustrated at how we can talk about interdisciplinary complexity and transcontextuality in our thought processes and imagined futures when *I* cannot wholly understand *your* ideas and *you* cannot fully grasp where *I* am coming from, in my concepts and my embodiment.

T: What you are proposing is a problem of communication *in general*, emergent in any moment of interactive and intersubjective encounter.

S: Where do we go from there? How does anything get done at all when we cannot even agree on the resonances of single words we use?[1]

T: You rush into asking the question of 'doing' (accomplishing, acting, achieving, exploiting). Neither of us are quixotic enough to think that perfect understanding can change the shape of things as they are, or that it is 'literally' achievable. Metaphors do not mould materials or make new men out of old; *they can only provide a sense of direction*.

S: And the 'great achievement' of providing this sense of direction, a mapping of the processual patterning of ideas, may be the overcoming of the great preference we give to the monomial drive to 'do' —the literal, measurable, great achievements of purposive (non)thinking.

T: Sure. The first step would be to make 'my' mental ecology apparent to 'yours,' in hopes that we will find ways to relate to our shared social ecology in a way that is non-exploitative, and perhaps even creative. No such 'doing' occurs here, our shared space silent enough to allow new emergences.

S: So what about the work of theorists and their playtime with their favourite words? So many of them *still* talk as if they should or even could productively produce such plans for the generality (and specificity) of humans on earth. We need to talk about scale.

T: It is brilliantly easy to be (intentionally) unaware of how ideas, the skein of scientific-aesthetic descriptions and associations calcifies into purposes, functions, laws and constants. I do not think it is a coincidence that Felix Guattari called this a process of "semiotisation": the perceived stability of words operate behind a veneer so that any sort of mode of chaotic discomfort, including relations of recursivity and radical alterity, can be neatly packaged into digestible, hermetically sealed equivalences.[2] We cannot equate the process of nourishment and nurturing to the task of measuring pre-portioned meals.

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[1] An extensive bulk of this thesis project is an ongoing return to this question.

[2] Felix Guattari, *Chaosmosis: an ethico-aesthetic paradigm*, trans. Paul Bains and Julian Pefanis (Bloomington and Indianapolis: Indiana University Press, 1992), 85.

The neoliberal myth of the world market offers a misleading notion of singular systemization, by which subjects and their economies vegetate into a state of stasis and uniformity. So much depends on imagining, and therefore inhabiting otherwise.

S: So can our words, or more precisely the relations between words, excite and mobilize these states of homeostasis that may have become rigid and complacent? Can words remind us of the fluctuating, precarious, circuitous and potentially creative nature of living process in general?

T: Maybe. That is your task, one I can be an interlocutor for. But for now, perhaps our shared task is to generate moments of turbulence, and thereby reflective space to exchange words and food about the state of words and food—who buys what, what is allowed for what purpose, and so on. I believe such an exploration entails articulating *between* ecologies that are described as mental, political, economic, environmental, scientific, and so on. This would then account for how such modes of articulation come across their own categorizing and categorizational limits in their very process. But that is just a single vocality, mine—that can perhaps be juxtaposed with other vocalities.

S: I remember mentions of ecological crisis, racism, global warfare, and various other epiphenomena of homogenizing, epistemologically erroneous collective practices emerging in our shared classroom. These considerations were necessary, for disaster was and is an immanent presence. Matters pertaining to 'what is going on' in our own heads and *between* our heads in that classroom, and the collective affairs 'outside,' were so tightly woven together—

T: —perhaps that *is* 'mental process.' The unity of mind and nature.

S: So the premise I wish to emphasize, and which I believe to be of the most immediate and relevant necessity to our contemporary moment, is the notion that the systemic shortsightedness of our conscious purpose, and all-pervasive forms of reductivism and the epiphenomena of the mind-body dichotomy, could perhaps be helped mitigated or avoided by a serious consideration of mental processes that are not quick to solve

problems but attempt to find resonances between things. This would include *doing* the labour of following a long and tedious path of computing all the relations between relevant variables. The resonance might then invite the labour of theorizing about labour as a product of mental process in its own right.

T: Like I have mentioned again and again, this is a *question of scale*, or the question of metrics, precisely what I think remains as the forefront problem.

S: Help me through with this, one more time.

T: I think I am saying what you have just articulated, but with different words. There is always a scalar difference or a varying metric that goes along with the content of what is being taught. That is, there are orders of learning at meta-levels and meta-meta levels, and so on, that examine *not* the transmission of *x* or *y* to the learner, but the learner's implications for character, about what sort of world the learner thinks she is living in, about what sort of world the relationship between her and peers and her teacher emerges from, about how her central 'findings' relate back to the variegated, perplexing, and often violent world she is living in, and so on. The resonances of words that are closest in meaning across languages do not have the same connotations or resonances in the other language.This is the problem of *translation*: the often arduous and convoluted task of finding resonances between distinct languages and ways of being, enveloped in the beautiful compulsion to be as precise and true as humanly possible.

S: And what about the body as frantically in-between the gaps of translation... The body allows for the exploration of radical intertwinement and relationality. It is the locus of susceptibility to the world, yet that exposure inevitably punctures gaps of vulnerability with which to relate to another, which threatens to injure and ache. The looming possibility of exploitation, the economy of punitive power which is identitarian in nature, seeks to muddle everything we have talked about here.

T: Each variation of the question, different but related to the underlying pattern, is, and perhaps must be susceptible to our consideration. What we are compelled to recognize is

that each and every one of us is a living organism, with all the structures and punctures and patternings of a living organism. What I am trying to say is that this encounter between us, this attempt to ask questions of compounded constitutionality, is a process of emergent learning to ‘be’ alongside what appears to you outside and what is apparent to you within. And this may be the ‘great achievement' of our words: “To compare one form with another, when one of the forms is us.”[3]

S: At the end of the day, have we silently agreed on something or will we loudly disagree on it together?

T: Perhaps neither, or both, all at once.

S: What will I *do* when you are no longer here?

T: Sift through the words you have read again and again. They are written on your skin.

S: ...

“And last, there is death. It is understandable that, in a civilization which separates mind from body, we should either try to forget death or to make mythologies about the survival of transcendent mind. But if mind is immanent not only in those pathways of information which are located inside the body but also in external pathways, then death takes on a different aspect. The individual nexus of pathways which I call "me" is no longer so precious because that nexus is only part of a larger mind. The ideas which seemed to be uniquely me can also become immanent in you. May they survive—if true.”[4]

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[3] Stephen Machmanovitch, The Art of Is: Improvising As a Way of Life (Novato, CA: New World Library, 2019), 157.

[4] Gregory Bateson, “Form, Substance, and Difference,” *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 471.

« i. Emergence: living with frantic liminality »

They cannot be talked about (digitalized) at all, whereas they can certainly be (and in fact always are) communicated.

Anthony Wilden[5]

A science in conflict with the language of its own investigations is an absurdity.

Walter Benjamin[6]

I would like to begin where Gregory Bateson ended in his "Last Lecture," written and delivered in the fall of 1979. In one of his last recorded written works, Bateson reflects upon the varied and potholed trajectory of his career, the search patterns he has diligently followed as a lifelong student of life. From his fieldwork in New Guinea as a freshly graduated 23 year old scientist, to his traumatic participation in World War II as an information analyst, to his last days as onsite elder at the Esalen Institute, movement of context and environment was a necessary requirement for him to articulate the kind of questions that had remained salient to him up to death. These were namely the relationships between ecosystem and metasystem, mind and body, form and substance, entropy and inflexibility, complexity and chaos, all the while attempting to understand where the individual (her ideas, desires, quirks and precarities) 'fits' into this larger scientific and aesthetic picture. Bateson, therefore, studied the isomorphic organizations between the processes of evolution and the processes of epistemological development. He believed because everything that is worth 'speaking' about in the living world is muddled by everyday language hiding the truth of its own radical relationality, there emerges a paradox of epistemology at the very base root of what he called 'Anglo-Saxon occidental culture,' or perhaps what Donna Haraway calls "'White Capitalist Patriarchy (how may

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[5] Anthony Wilden, *System and Structure: Essays in Communication and Exchange* (London: Tavistock Publications, 1972), 40.

[6] Walter Benjamin, "Epistemo-Critical Prologue," *The Origin of the German Trauerspiel*, trans. John Osborne (London/NewYork: Verso, 1998), 42.

we name this scandalous Thing?)"[7] A favourite story of his to illustrate this picture features him asking a student how many fingers he has, to which he answers, "Five." Bateson believes this to be an incorrect answer, the correct one being some variation of "Gregory, you are asking a question wrongly"—for in the evolutionary emergence of patterns and organization, "there is surely no word which means finger, and no word which means five."[8] Industrial capitalism and its 'intellectual' enterprises asks only how many fingers are a result of their relating, yet evolutionary process asks how many relations did it take to make a hand. There are only the relations between pairs of fingers that can account for any attempt to quantify the existence of fingers; the scientist open to life, therefore, must count not the items of relation that are related, but the relationships.

Further on, Bateson writes: "It is not a new idea that living things have immanent beauty, but it is revolutionary to assert, *as a scientist*, that matters of beauty are really highly formal, very real, and crucial to the entire political and ethical system in which we live."[9] If anything worth knowing about the self or the other or the world exists in a tangle of relationships, the scientist must learn to navigate such tangles, in fact to see them as *entanglements that are not irredeemable.* The biological epistemology, or the cybernetic promise at the crux of Bateson's way of seeing asks to see things not as things (supported by a flawed language), but as interlocked patterns of relationships (its radical systemicity) that are an immanent determinant of growth of such systems. In Batesonian cybernetic explanation (contra the mechanistic conscious purpose of Norbert Weiner and the 'hard' strain of first-order cybernetics that Bateson eventually distanced himself from), it is not a question of why *x* or *y* happened, but a question of what constraints operated so that *x* or *y*, or anything at all, *didn't* happen. When Bateson appeals to the notion of immanent beauty in the social and mental ecology of systemic forms, he is attempting to make appear the *synchronic* (or paradigmatic) aspect of cybernetic explanation: in other words,

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[7]Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies*, Vol. 14, No. 3 (Autumn 1988), 592.

[8]Gregory Bateson, "Last Lecture," *A Sacred Unity: Further Steps to an Ecology of Mind*, ed. Rodney E. Donaldson (New York: Harper Collins Publishers, 1991), 310.

[9]Ibid., 311.

how a level of organization of a system operates as commentary on the content of another level of organization. At the same time, perhaps paradoxically, this explanation is also *diachronic*—insofar as the description of one developmental pathway at a particular scale remains latched in evolutive process by way of and through its movement to another. The world that would appear, at the scale of my own body and outwards, may perhaps be beautiful—precisely because of the taut paradox of 'both-and' mobilizing structural and metacommunicative process. In Isabelle Stengers' words: "The 'and…or' does not impose abandoning a possibility. It brings about a new kind of appetite—appetite for the 'field' as speculatively implied by the possibility of emergence, a field where both the emergent's requisites and the finalities that will be attributed the utmost be actualized."[10]

The premise of *emergence* is the label, no matter how unsteady, that many scientists and thinkers have given to the "highly formal, real, and crucial" matter of beauty in scientific enquiry after Bateson's time. To speak *directly* of emergence in scientific fields entails an acceptance of interrelationality as an indispensable premise of scrutiny, beneath and beyond the question of how to identify and describe. A scientific process and praxis forthwith in addressing emergence as an urgent concern within the coordinates of its discipline can be said to be open to the possibilities of cybernetic (non)logics, of the dissipative coherences of bifurcating systems—perhaps towards the ethical and aesthetic conception of beauty that Bateson was concerned with throughout his life. At the same time, emergence entails an active willingness to grapple with the epistemological precarity consistently present throughout the process of defining the framework within which this beauty may appear. An encounter with the problem and possibility of emergence in scientific enquiry—in mental process in general—is conjoined with another encounter, the scale of assumed power of knowledge occupying the discipline, vastly disproportionate to the matters of complexity, (neg)entropy, and fractal entanglement in question.

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[10] Isabelle Stengers, *Cosmopolitics II,* trans. Robert Bononno (Minneapolis and London: University of Minnesota Press, 2003), 228.

Yet a science of emergent possibilities, of *resonance*, is a discursive confrontation with its own potentiality to be rigidly bound to such discursive confrontations. To conceive of the question of epistemology *solely* as a punitive agent for the imperialism of mechanistic rationality, or to accept the question of disciplinary/bureaucratic power as the *only* way to define epistemic outlines in need of illumination, is to restrict the definition of emergence simply in terms of transactional, reductive confrontation. The stakes of this confrontation would simply be rhetorical, its operational epiphenomena absent in the territory of the laboratory, the society, or the individual life of the implicated organism. The potential for the constructive practice of emergence, then, is embedded in the processual development of singular scientific 'findings' with their paradigmatic blueprints and databooks, as well as the appositeness of these 'findings' as 'applied' in the texture of positioned and non-sovereign, enmeshed and precarious lives. Emergence, at best, may assist in accounting for the difference (that makes a difference) between the number of fingers, the number of relationships between the fingers, and the co-constituted and coevolutionary history of the formal structure of the human hand, all compounding to disclose a way of perceiving and approaching the questions conducive to an understanding of life.

Bateson playfully called such questions conducive to understanding life as constituting "the Riddle of the Sphinx," to which he had "devoted fifty years of professional life as an anthropologist."[11] A riddle of the Sphinx, for Bateson, is 'simply' a question of death and life: within the frame of the riddle, one must balance the context as well as the knowledge of oneself as such to arrive at a negotiable outcome. The paradox of simplicity resonates in its mythical roots: when Oedipus encountered the Greek sphinx, he was asked a riddle: "What speaks with one voice, yet in the morning walks on four legs, walks at noon on two legs and in the evening walks on three legs?" Oedipus was the only individual to answer correctly: "Man." Upon hearing her riddle solved with irreverent simplicity, the sphinx was livid and tormented, and threw herself to the rocks below her to die. Such a simple answer to her enigmatic question was cause for affective disturbances enough to

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[11]Gregory Bateson, "Innocence and Experience" in *Angels Fear: An Epistemology of the Sacred* (Bantom Books, 1988), 178.

kill a mythical creature, and the cyberneticist would partake in her misery. As Alfred North Whitehead says: “The aim of science is to seek the simplest explanations of complex facts. We are apt to fall into the error of thinking that the facts are simple because simplicity is the goal of our quest. The guiding motto in the life of every natural philosopher would be, ‘Seek simplicity and distrust it.’”[12] ‘Simply’ put, the riddle traumatizes the player by death and finitude – finitude of and as *life,* within the infinite permutations of a concurrence of outcomes. Anything can happen within the riddle, including the violent, (albeit efficient) reduction of its own premises.

Questions of life and death were not unfamiliar to Bateson. His oldest brother, John, was killed in the frontlines of the first World War, and his second brother, Martin, committed suicide after a traumatic heartbreak when he was 22. Gregory himself was traumatized by war experience: he had come to America with then-wife Margaret Mead in the 1930’s only to abruptly return to Britain to serve in the war. When he was told they did not have any use for an anthropologist, he sailed back to the United States and spent the war in the Pacific working for the OSS, the parent organization of what is now the CIA.[13] He worked as an information analyst involved in psychological warfare and disinformation, in effect contributing to the war with his understanding on the nature of communication and cultural exchange. Although he deeply believed in the importance of defeating the Axis powers, the act of deliberately distorting communication for instrumental means was something that inflicted much pain on him. The steady realization that his own work in cybernetics and communications theory was being applied to feed the war machine cultivated in him a general disillusionment in applied science, which informed his career

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[12] Alfred North Whitehead, *The Concept of Nature: The Tarner Lectures Delivered at Trinity College November 1919* (Echo Library, 2006), 163.

[13]Mary Catherine Bateson, “The Double Bind: Pathology and Creativity,” *Cybernetics and Human Knowing: a journal of second-order cybernetics, autopoiesis and cyber-semiotics*, vol. 12, no. 1-2: (2005), 13.

and personal decisions for the rest of his life[14]—perhaps as a 'quiet maverick' of sorts. By lived experience, Bateson's questions of life and death, then, approach questions of how you know what you think you know, questions of cause and effect, how what you know 'translates' in the material world. The questions conductive to an understanding of life, then are questions of (mis) translation, of trauma and violence, as much as questions of relationship and difference.

In the second half of *Cosmopolitics*, Isabelle Stengers designates the concept of emergence as a rhetorical challenge of scientists to explain the totality of a phenomenon as an emergent whole, the totality being a sum of the parts as the conditions of its analysis. In order to arrive at coherent grasping of a phenomenon, that is, to master its unravelling processes as objects of inquiry, emergence becomes inappropriately instrumentalized as a tool for analytic rigour. Indeed, the constructive potential for emergence lies in "the obligation [of science] to recognize the powerlessness of analytic thought": emergence must strive to emerge from its initial polemical history/context, its conceptual origins as forged to interrupt the reductionist bias of 19th century science.[15] Stengers defines emergence as a practice of articulating that which is inarticulable by purposive, object and objectivity-oriented explanation—not of the objects implicated in exchange, but of the imbroglio of relationship that binds them into encounter. In Batesonian terms, we would be able to say that emergence is always partaking in a

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[14] Consider Deleuze and Guattari's mythologization of Bateson as the barefoot scientist wandering into mid-century chaos, although they—perhaps deliberately—muddle the chronological order of biographical events (*i.e.* Bateson's participation in the American military prefaced his work with schizophrenia and dolphins). : Deleuze and Guattari may simply assume chronology does not alter and interact with the content of Bateson's work, as though these 'steps towards an ecology of mind' were co-existent. This is a prevalent and insidious in humanities scholarship, for it is a reductionism that excludes the possibility of emergence. "Let us consider the more striking example of a career a l'americaine, with abrupt mutations, just as we imagine such a career to be: Gregory Bateson begins by fleeing the civilized world, by becoming an ethnologist and following the primitive codes and the savage flows; then he turns in the direction of flows that are more and more decoded, those of schizophrenia, from which he extracts an interesting psychoanalytic theory; then, still in search of a beyond, of another wall to break through, he turns to dolphins, to the language of dolphins, to flows that are even stranger and more deterritorialized. But where does the dolphin flux end, if not with the basic research projects of the American army, which brings us back to preparations for war and to the absorption of surplus value."
Gilles Deleuze and Felix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia,* trans. Robert Hurley, Mark Seem, and Helen R. Lane (Minneapolis: University of Minnesota Press, 1983), 238.

[15] Isabelle Stengers, *Cosmopolitics II,* trans. Robert Bononno (Minneapolis and London: University of Minnesota Press, 2003), 209.

metacommunicative grappling with its own contrasting levels of abstraction. What is at stake is the implicit nature of metalinguistic and metacommunicative messages in any attempt to explain and encounter other communicational organisms-systems.[16] Metacommunication is communication about the quality or mood of communication between the speakers; *i.e.* it is communication about the *nature of relationship* between the speakers. Bateson writes: "The ability to communicate about communication, to comment upon the meaningful actions of oneself and others, is essential for successful social intercourse. In any normal relationship there is a constant interchange of metacommunicative messages such as "What do you mean?" or "Why did you do that?" or "Are you kidding me?" and so on. To discriminate accurately what people are really expressing, we must be able to comment directly or indirectly on that expression. This metacommunicative level the schizophrenic seems unable to use successfully."[17] To muddle up these orders or levels of communication, to make explicit what must remain implicit or vice versa, is to mistake the scalar specificity of one kind of message for another. This causes (schizophrenic) pathologies in communication that can be detrimental for the individual at the scale of their body, and the system at various scales of *its* body.

Stengers, however, is consistently wary of the problem of emergence as a convenient tool in the contexts of the sciences, as a way of ensuring that the findings that have 'emerged' are symmetrical to their search patterns and applicable 'for' the world at large. It becomes a matter of relevance to mention that *Cosmopolitics* as an epistemological project emerged from Stengers' continuation of the work of Thomas Kuhn, Michel Foucault,

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[16] Bateson drew from Russell and Whitehead's work in *Principia Mathematica* (1910), particularly in their theory of logical types to understand that communication (various contexts, genetics, learning, psychological frames, etc) is a matter of **scale**. The difference between message, metaliguistic message, and metacommunicative message is differentiated by Bateson's go-to example of the cat on the mat. What is explicitly verbalized (digitalized) is the statement "The cat is on the mat." On a more abstract level, the *metalingujsitic* message could be something like "The verbal sound 'cat' stands for any member of such and such class of objects." On an even more abstract level, the *metacommunicative* message could be something like "By telling you where to find the cat, I meant to tell you solidify a common basis of understanding between you and me.")

[17]Gregory Bateson, "Towards a Theory of Schizophrenia," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 215-216.

Alfred North Whitehead, and Gilles Deleuze in scrutinizing the pretensions of science to contemporary society as well as notions of objectivity, rationality, and truth. Her contemporary participation in a resonating system shared with the likes of Michel Serres, Donna Haraway, Bruno Latour, and Vincent Despret furthermore instantiates the movement of her larger theoretical endeavour towards a notion of "an ecology of practices." Stengers' "ecology of practices" offers not a list of solutions to tackle global crisis, but undertakes a process of learning "the creation of new ways of resisting, in the present, a future that derives its plausibility from our powerlessness as well as from effective power relationships through which that future is established."[18] The metacommunicational dynamics of emergence, then, attests to its own directionality as being "never 'passively' asked, [but] always actively asked," an *ongoing articulation of relationship* between neuronal or monadic entities, as well as the ways of experience they compound towards.[19] Perhaps this can be 'applied' back to the trajectory of philosophers in science, as well as the academic playgrounds labeled 'posthumanism' and 'new materialism' that seem to operate under the premise that the repetition of articulations, of entertaining and embracing redundancies in their 'findings,' may in itself be a form of an recurrent and ongoing polyphony. The promise of emergence entails the presence of an unremitting *eros* in articulating and rearticulating the ethical and aesthetic question of mutual participation in relationship: *Who are you to me, and who am I to you?*

Distinct but not separate, Donna Haraway coins the term 'emergent naturecultures' to describe the companionship within interspecies' relationships as an affective and resonating model for radical interdependency in the "Companion Species Manifesto." The epistemological background from which the Manifesto was emergent was developed two decades ago in her 1988 seminal essay "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." Haraway mobilizes a redefinition of objectivity, rationality, and scientific rigour to account for the epistemology,

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[18] Isabelle Stengers, *Cosmopolitics II,* trans. Robert Bononno (Minneapolis and London: University of Minnesota Press, 2003), 407.

[19]Ibid., 222.

transmission, and politics of "partial" perspectives. The notion of partiality that Haraway develops thrives in its seemingly contradictory definitions: a partial perspective connotes the workings of preconceived presuppositions restricting one's line of vision, yet to be partial to an idea, a position or a living being is to experience affection, care, and tenderness to its particular way of being. To love, to be affected by the unknowable other at the level of one's body, shares the same process of emergence as that of understanding one's epistemological framework as embedded in a location—a site of overlapping contingencies—that cannot claim totality or universality in its own relevance. I must articulate 'my' relationship with you in order for me to know of my position in the world we co-inhabit together, to begin to know what you mean, and so on, so that we can navigate each other's way of being-here in the emergent natureculture we may call our mutual habitat. Haraway does not reject science's canonical fascination with the question of objectivity or rationality yet attempts to redefine its boundaries to emphasize multiplicity in loci and positionalities that may concur in a notion of scientific knowledge. Science *situates,* meaning that that the taut paradox of partiality is the primary condition for any claim of rational knowledge.[20] To be objective no longer means (perhaps never meant) indifference and impartiality, but profoundly stained, interwoven and injured by the very object of knowledge in question—not as a contained phenomenon or raw resource to extract, but as an agentive participant in the shared encounter. A position of impartiality still entails occupying a positionality, rooted in a particular location and therefore contingent and vulnerable to that which is unexpected and other.

Haraway's notion of emergence, then, involves a motley of epistemic approaches that include consideration for "process, historicity, difference, specificity, cohabitation, co-constitution, and contingency," partaking in an epistemological questioning that is necessarily feminist and decolonial— categories which mean, if anything, learning "how things work, who is in the action, what might be possible… [to] love each other less

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[20] Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies*, Vol. 14, No. 3 (Autumn 1988), 589.

violently."[21] Such learning would entail change at the level of epistemology, what Bateson called "a change in how to know about the personality-in-the-world."[22] Haraway borrows the term "emergent ontologies" from Helen Verran to describe where the epistemological approach—defining the perimeters of scientific inquiry—recursively circles to and from.[23] Epistemology as an emergent practice works towards an enlarged conception of *how to be* in the world (with others in a shared environment). In other words, any investigation into the networks of implicated interrelationality constitutive of how we know what we know must include confronting the problems of 'is': how things are, what an organism is, and how a natureculture works. In a model of processual emergence, therefore, ontology and epistemology may be split (in Haraway's conception of a "split" as being conductive to "heterogenous multiplicities that are simultaneously salient and incapable of being squashed into isomorphic slots or cumulative lists"[24]) but it would be erroneous to presume they are separable. My (often deep-seated) beliefs about my self, the other, and the world will determine my perceptual possibilities as well as how I will act in accordance to them, and my way of perceiving/acting will determine my beliefs about perception and being active and alive in the world. The art of dwelling in a natureculture is, therefore, a process of learning about (participating in) the emergent quality of situated knowledges, the moment (which is never a moment but an extended duration of mutual relationality) of discovering together "more livable worlds." This discovery does not disclose anything but the tangible meaningfulness of particular others, and perhaps the desire to know how to live with this other that I am coming to know,

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[21]Donna Haraway, "The Companion Species Manifesto," *Manifestly Haraway* (Minneapolis: University of Minnesota Press, 2016), 99.

[22]Gregory Bateson, "The Cybernetics of Self," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 313.

[23]Donna Haraway, "The Companion Species Manifesto," *Manifestly Haraway* (Minneapolis: University of Minnesota Press, 2016), 99.

[24]Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies*, Vol. 14, No. 3 (Autumn 1988), 586.

which may be called love.[25] The ‘promise’ of emergent naturecultures, then, lies in its dedication to search for potentialities outside of normative conclusions—to perhaps find the reward of beauty more abounding, more eloquent and clarifying than the reward of power.

Both Stengers and Haraway propel their definition of emergence with the reverberating premise of mutual definition: in an emergent conception of relationality, wholes and parts must recursively negotiate themselves, in a co-constituted process of understanding one’s own and the other’s implications. In a sense, there is an inherent pacifism to emergence as an epistemological practice; emergence seeks to cease the fraught conflict of definitions clashing into each other in a battlefield of mis-claimed authority, the reductionist impulse to assign meaning to the other on one’s own terms. Yet this pacifism refuses to mutate into inert quietude or discursive stagnation, for it is the *appetite* of emergence (or the emergent appetite) to encounter itself through the relationships it enunciates. The constructive potential for emergence appears when the epistemic precarities elaborating upon it are compelled to encounter its own latent presuppositions othered to themselves, which may be described as an affectively challenging yet significant moment of experiencing “the relentless pressure of saying and feeling yes/but, both/and.”[26] The question of science, therefore, becomes one that is localized and embodied in the frantic liminality of living within the oscillating ‘both-and’ of emergent possibilities.

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[25] Haraway defines love as a willingness to “inherit all the conditions of their possibility… to be in love means to be worldly, to be in connection with significant otherness and signifying others, on many scales, in layers of local and global, in ramifying webs.”
Donna Haraway, “The Companion Species Manifesto,” *Manifestly Haraway* (Minneapolis: University of Minnesota Press, 2016), 172.

[26]Donna Haraway and Cary Wolfe, ”Companions in Conversation,” *Manifestly Haraway* (Minneapolis: University of Minnesota Press, 2016), 212.

« ii. The dynamics of ecological (ecosophic) crisis »

I hold to the presupposition that our loss of the sense of aesthetic unity was, quite simply, an epistemological mistake.

Gregory Bateson[27]

By 1968, Bateson was beholden to the hypothesis that a systemically disrupted understanding of the effects of our actions *(i.e. "*a sort of blindness to cybernetic circuitry"), called for maladjustments and ruptures in natural and cultural processes to pathological degrees.[28] He called for a conference called "The Effects of Conscious Purpose on Human Adaptation" at Burg Wartenstein in Switzerland in the summer of 1968, initiating an interchange of positions on how humans think and communicate about —and make decisions upon—structures of natural systems that require urgent understanding.[29] The question that Bateson posed at Burg Wartenstein was one about epistemological errors, or the 'hard programming' of conscious purpose that paves way for mass maladjustments in human adaptation within the biosphere. These errors were based upon unexamined 'impulses' towards problem solving and achievement of goals as a culture, *i.e.* conscious purpose. The central premise by which the conference commenced was that the failure of conscious purpose in leading to actions is not just connected to, but constitutive of, the failure of the human being to understand the

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[27] Gregory Bateson, *Mind and Nature: A Necessary Unity (*New York: E. P. Dutton, 1979), 18.

[28]Mary Catherine Bateson, *Our Own Metaphor* (Washington: Smithsonian Institution Press, 1972), xi.

[29] Ibid. Those in participation included Warren McCullogh, then-chairman of the Macy Foundation Conference on Cybernetics, Barry Commoner, an American Geothean biologist and politician who contributed to the "Information Movement" along with Margaret Mead, Will Jones, a historian of philosophy, Fred Atteneave, a psuchologist specializing in the problems of perception, Gordon Pask, a British cyberneticist, Bernie Raxlen, a Canadian psychiatrist with anthropological interests, and Horst Mittelstaedt, a German zoologist turned cyberneticist and physicist—and Mary Catherine Bateson, anthropologist, Gregory Bateson's first daughter, and author of the book that reports the conference. Here, I must address the question of the credibility of Mary Catherine Bateson, at least pertaining to the details of Gregory Bateson's thinking. She alternates between being her father's dialogic interlocutor where both are active participants (*i.e.* in the collaborative metalogues published in *Angel's Fear*) and becoming a self-appointed spokesperson for her father when he can no longer speak for himself (*i.e.* as in her essays pertaining to Bateson's lifelong work and legacy published after his death.) While her contributions and adjacent insights to Bateson's thought are valuable as a secondary source, there needs to be some hesitation in wholesale accepting the comments about what she thinks her father *might have* thought.

systemic character of the natural world.[30] That which would 'correct' the linear reductivism and pathological belief of power over the environment that seems to spill out from normative industrial practices, then, would become a matter of investigating into the fractality of emergent possibilities in how we think about the systemic workings of global-scale problems and their proposed 'solutions.'

Bateson believed that an idea, if believed in by enough people with enough certainty and met with enough technical execution, produces 'by-products' in the real, embodied world at large—so that those very ideas, whether they demonstrate systemic destruction or restoration, are nurtured into the texture of everyday life. To paraphrase his model of "Dynamics of Ecological Crisis" (fig. 1): unchecked growth of population, technology, and "hubris"— belief in dominance over self, other, and planetary ecology— interconnects and accelerates into epiphenomena of famine, pollution, and war.[31] Any attempt to 'reprogram' the dynamics of ecological crisis begins with an attempt to correct the autocatalytic growth of certain presuppositions about the ecology of nature and, therefore, the ecology of self. Bateson believed this task to be a profoundly aesthetic one: it is in some kind of wholeness of aesthetic perception that conscious purpose may be 'steered.'[32] So much depends upon the ability to conceive of self, other, and environment as systemic entities nested within larger systems, or 'ecologies of mind.'[33]

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[30] Mary Catherine Bateson, "The Double Bind: Pathology and Creativity," *Cybernetics and Human Knowing: a journal of second-order cybernetics, autopoiesis and cyber-semiotics*, vol. 12, no. 1-2: (2005), 14.

[31]Gregory Bateson, *Steps to an Ecology of Mind* (Northvale, NJ: Jason Aronson Inc. 1982), 498-499. "…the bigger the population, the faster it grows; the more technology we have, the faster the rate of new invention; and the more we believe in our 'power' over an enemy environment, the more 'power' we seem to have and the more spiteful the environment seems to be."

[32] Gregory Bateson, *Mind and Nature: A Necessary Unity (*New York: E. P. Dutton, 1979), 110-113. The conductor and the steam engine is a central metaphor for Bateson (borrowing from Alfred Russel Wallace's comparison with the steam engine with a governor and the process of natural selection) and his discussion of analogic systems (as opposed to digital systems), or cyclical systems that vary continuously and in accordance to the magnitude of 'fuel' or 'energy input'. The angle of the arms of the governor is continuously variable and has a continuously variable effect on the fuel supply; in other words, it is in the *relationship* with the governor's body and the machine that instigates an exchange of information and therefore the dynamism of the system. In analogic systems, *differences* between what happens in one instance of the circuit and events in the next round become the crucial factor in the self-corrective process.

[33]In the cybernetic sense, 'mind,' 'mental process,' and 'system' are interchangeable, and thereby mechanistic to some degree: showing that a system can learn, respond, interpret events, and can self-correct in various ways.

The ‘new’ science, then, proposed by the works of cyberneticists and system theorists in the twentieth century, was characterized by recognizing the immediate necessity of working at a meta-level; that is, an *epistemological* level that ‘thinks about thinking’ and ‘inquires about inquiry,’ presenting at the same time the content of what is thought and inquired into. The resonating question that Bateson asked himself and his environment was: “How does ideas, information, steps of logical or pragmatic consistency, and the like fit together? How is logic, the classical procedure for making chains of ideas, related to an outside world of things and creatures, parts and wholes? How is the world of logic, which eschews ‘circular argument,’ related to a world in which circular trains of causation are the rule rather than the exception?”[34] As of 1979, the date of the publication of *Mind and Nature,* Bateson confronted the possibility that logic and quantity turn out to be inappropriate devices for describing organisms, their interactions and internal organization, and that “there is no conventional way of explaining or even describing the phenomena of biological organization and human interaction.”[35] Knowledge becomes indistinguishable from normative conclusions or fragments of presuppositions labelled ‘common sense’; mental process operates and lives beneath and beyond the products of the accepted kernels of know-how of the prevailing paradigm. In cybernetic terms, the system (of knowledge) goes into runaway, self-perpetuating and therefore unchanged. What is still (wilfully?) unknown is the scientist’s own knowledge of himself. This includes his educative moulds, the trajectory of his child and adult experience, the skein of his relations with others, etc., that shape and inform presuppositional contexts.

About three decades later since the time of Bateson’s modelling of ecological crisis, Felix Guattari introduced the notion of (schizo)chaosmosis to describe a model or mode of perceiving disparate articulations of chaos and complexity in “abstract machines.” This modelling occurs first and foremost at the level of our own verbalizations, which in turn

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[34]Gregory Bateson, *Mind and Nature: A Necessary Unity (*New York: E. P. Dutton, 1979), 19-20.

[35] Ibid. A quote that ‘redefines’ art by Theodor Adorno, spoken ten years ago from this moment, transfers and reverberates quite strongly here: “It is self-evident that nothing concerning art [*scientific inquiry*] is self-evident anymore, not its inner life, not its relation to the world, not even its right to exist.”
(*Aesthetic Theory,* 1 [1969])

may reroute scientific analysis to consider "revitalizing complexions of alterity and rekindling processes of semiotization."[36] Trained as a psychotherapist, Guattari observed the members of the 'mad,' 'insane,' residual class violently and irredeemably reified into a class of pathologized strangeness. This led him to scrutinize the constructions of subjectivity as plural and polymorphic, first at the scale of the individual mind (the "psyche"), then the socio-political/institutional group (the "socius"), and finally the ecological system (the environment). Guattari attempted to model the discomfort of chaos as an "emergent ontology" of its own, emphasizing the polyphony of chaosmic components as a byproduct of some sort of 'non-obvious' functional organicity. His ethico-aesthetic processual paradigm attempts to nurture radical alterity as a way of refounding political praxis—an alterity that is "*grasped at the point of its emergence*—non-xenophobic, non-racist, non-phallocratic—intense and processual becomings, a new love of the unknown…"[37] Such a political and ethical project required an immanent embrace of the process of emergent enunciation (enunciative emergence?) in the social and mental ecologies of those implicated, which in turn provides the epistemological flexibility or processual creativity required to *see* the polyvocality of chaosmic alterity. Guattari instantiates a process of *ethical depathologization*: that is, to privilege and not efface the "the emergent fractality of the Unconscious," and thereby actively working to construct new assemblages of therapeutic listening and metamodelization at an ecological scale.[38]

At the end of *Chaosmosis: an ethico-aeshetic paradigm*, Guattari inaugurates the figure of the *ecosophic subject* to articulate the task at hand: technoscience must bolster processual emergence as an urgent conductor for creativity, which in turn may catalyze a sense of ontological responsibility in accordance of which the infrastructure of science

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[36] Felix Guattari, *Chaosmosis: an ethico-aesthetic paradigm*, trans. Paul Bains and Julian Pefanis (Bloomington and Indianapolis: Indiana University Press, 1992), 85. The notion of an "abstract machine" delineates the quality of frantic liminality that I have attempted to describe throughout the first section of this chapter. Guattari writes: "The machine, every species of machine, is always at the junction of the finite and infinite, at this point of negotiation between complexity and chaos." (111)

[37] Ibid., 117. My emphasis.

[38] Ibid., 64.

and technology must be built. The chaosmic process of an ecosophy requires us to consider the implications of logos in the term ecology itself, which includes the process of "articulating between scientific, political, environmental, and mental ecologies"—a rearticulation of Bateson's notion of "transcontextuality" as explored in my next chapter.[39] The ecosophic subject speaks of "machines rather than drives, Fluxes rather than libido, existential Territories rather than the instances of the self and of transference, incorporeal Universes rather than unconscious complexes and sublimation, chaosmic entities rather than signifiers—[which] may not simply be a matter of vocabulary!"[40] The ecosophic subject would know of Bateson's dynamics of ecological crisis as a *general* crisis of the global system, constitutive also of *particular* crises of social, political, psychological, existential means. They would be able to identify the paradigmatic inheritances of abusive normativities, propelling them to replace the rigid immobility of and between disciplines/sectors with hinging and synthesizing interpolations.

In *Mind and Nature*, Bateson begins by outlining his own presuppositions, the epistemological context from which he is writing his last book. The first presupposition Bateson considers 'every schoolboy [ecosophic subject] knows' is that "*Science never proves anything.*"[41] Science is an unending testing and re-testing of propositions that may "*improve* hypotheses and sometimes *disproves* them," but through which a 'discovery' of truth or an eternal verity cannot be 'found.'[42] In other words, science is an *emergent frame* placed around a subject of inquiry or object of examination. It is a *mode of perception,* a contingent map constructed to navigate the world of natural phenomena 'on-the-territory.' Articulated through Guattarian vocabulary, one could say that science does not exhibit objective fact but "rebounds and irrupts on the states of things…

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[39] Ibid., 134.

[40]Ibid., 126.

[41] Gregory Bateson, *Mind and Nature: A Necessary Unity* (New York: E. P. Dutton, 1979), 27.

[42] Carl Gustav Jung, "Septem Sermones ad Mortuos"**,** trans. H. G. Baynes (*The Gnostics Society Library*, online source, 1916), np.

[performing a] confrontation with heterogeneous states of complexity"—which allows for an emergent enunciation of an ethical and aesthetic paradigm.[43]

Furthermore, Bateson borrows from Carl Jung (who borrowed from the Alexandrian Gnostics of the 2nd century A.D.) to make the distinction of *Pleroma*, a billiard ball model of the world determined by pure physicality, where the mechanical forces of cause and effect render distinctions meaningless; and *Creatura,* the world governed precisely by *distinction* and *difference*, within which organisms with sensory end organs respond to difference and signal messages in turn.[44] Pleroma is a world without descriptive propositions—in that the set of descriptive propositions to describe its physical causes and 'events' produces a vocabulary and syntax of 'pure' materialist epistemology. In other words, if we were to make 'maps' (*i.e.* scientific hypotheses, art objects, any product of knowledge and perception) strictly in Pleroma, process would be determined as a mechanical *thing*; perception, thought, and social interaction—the mental—are reduced to matters of the material. The territory then gets further and further obscured.

What is said about Pleroma is 'condemned' to eternally be a matter of speculation, for Pleromatic 'thinking' without Creatural process operates as a kind of Alexander's sword, chopping its way into a solution, dividing, forcing, and bartering away the pieces of the problem. There is a brute violence, expedience at the cost of complexity, to the illusion that Pleroma *is* what is said about it. As Jung writes: "When we distinguish qualities of the pleroma, we are speaking from the ground of our own distinctiveness and *concerning* our own distinctiveness."[45] We create what we already know, and what we already know never equates to the territory. We make distinctions in our descriptions of it, but that process itself, language, can only happen in Creatura. For communication and perception —and therefore *science*—to even remotely happen, an 'epistemological turn,' so to

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[43]Felix Guattari, *Chaosmosis: an ethico-aesthetic paradigm*, trans. Paul Bains and Julian Pefanis (Bloomington and Indianapolis: Indiana University Press, 1992), 112.

[44]Carl Gustav Jung, "Septem Sermones ad Mortuos"**,** trans. H. G. Baynes (*The Gnostics Society Library*, online source, 1916), np..

[45]Ibid.

speak, must occur to conceive of a way of perceiving and relating the *simultaneity* of Creatura and Pleroma to oneself, and perhaps to another. The connectedness and concurrence of Creatura and Pleroma (*i.e.* Creatura and Pleroma as parts of a recursive system) is what Bateson began to call *mental process* or *mind*, which he believed accounted for matters of communication, biological evolution, play and learning, and art. The sense organ or the device that receives information is indeed 'material', but its *responsivity*, its ability to understand a message and compose one in return, must be distinguished as 'mental'.

Bateson believed that an *aesthetic* inquiry was required, placed in between or as mediating theory and practice. Truth about what can be *perceived,* or arrived at by induction from perception would be "something else again,"[46] beneath and beyond the compulsion to grasp the independence of things, or in outright attempt to subjugate things to another's passion for utilization. The aesthetic question emerges in the exact moment that the question of scientific truth swells and tautens according to polyphonic subjectivities and non-normative alterities. In a similar light, Guattari posits "the new aesthetic paradigm" as the ecosophic subject's last remaining habitat, the site of emergent creative potentiality at the intersections of all that is contingent, finite, and precarious. In his words: "It is in passing though this chaotic 'earthing,' this perilous oscillation, that something else becomes possible, that ontological bifurcations and the emergence of coefficients of processual creativity can occur."[47]

For the first-order 'hard-strain' cyberneticist who works for and with information, however, *meaning* 'proves' to be something else all over again. This is exemplified in the conclusion of the well-known cyberneticist Warren McCullogh's work on the topology of

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[46] A phrase frequently used by Bateson to suggest a difference in logical type. "Something else again" a delicate way to say we need a new logical type because it refuses to identify what the something else might be.

[47] Felix Guattari, *Chaosmosis: an ethico-aesthetic paradigm*, trans. Paul Bains and Julian Pefanis (Bloomington and Indianapolis: Indiana University Press, 1992), 82.

nervous nets in 1945.[48] Most notable was his postulation of a notion of circularity in cybernetic (nervous) systems, defined in terms of *heterarchical* ordering. The heterarchical oscillations of signal input and transference of information within the system are characterized by decentralized and multi-levelled patterning. Paraphrased by Peter Harris-Jones, McCullogh found that the topology of nervous nets were patterned by such multiple nodes of connection occurring among the synapses of the whole nervous system—which are, in turn, connected through each of the individual nodes through recursive reverberation.[49] This renders the relation between any nervous input and any outcome from nervous activity starkly non-linear, and the knowledge about what the nervous expressions signify highly indeterminate.[50] McCollugh then admitted that he could not proceed further because the math at the time could not deal with so profound a non-linear phenomenon; yet this problem was 'solved' a couple of decades later by computer technology.[51] The problem of *meaning*, however (perhaps closely related to the problem of beauty) remained. The data teemed, grew to proportions inconceivable and inaccessible to 'mind' at the scale of the human body, but it didn't *mean* anything—meaning that it didn't have a *context* to see it within, so as to perceive its role or place in its interactions.

Bateson took on the role or position of reminding his scientific circle of the primacy of context in his time; he posited that knowledge *about* context stems only from a methodology that views knowledge *in* context. In his own words: "Without context,

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[48]Warren McCollugh, "A heterarchy of values determined by the topology of nervous nets," Bull. Math. *Biophysics*, 7 (1945) 89-93. https://vordenker.de/ggphilosophy/mcculloch_heterarchy.pdf

[49] Peter Harris-Jones, "Gregory Bateson, Heterarchies, and the Topology of Recursion," *Cybernetics and Human Knowing: a journal of second-order cybernetics, autopoiesis and cyber-semiotics*, vol. 12, no. 1-2: (2005), 170.

[50]Warren McCollugh, "A heterarchy of values determined by the topology of nervous nets," Bull. Math. *Biophysics*, 7 (1945), 91. "Circularities in preference instead of indicating inconsistencies, actually demonstrate consistency of a higher order than had been dreamed of in our philosophy. An organism possessed of this nervous system is sufficiently endowed to be unpredictable from any theory founded on a scale of values. It has a heterarchy of values, and is thus interconnectively too rich to submit to a *summum bonum."*

[51]Peter Harris-Jones, "Gregory Bateson, Heterarchies, and the Topology of Recursion," *Cybernetics and Human Knowing: a journal of second-order cybernetics, autopoiesis and cyber-semiotics*, vol. 12, no. 1-2: (2005), 168-174.

words and actions have no meaning at all. This is true not only of human communication in words but also of all communication whatsoever, of all mental process, of all mind, including that which tells the sea anemone how to grow and the amoeba what he should do next."[52] A turn towards a contextual, ecological understanding of the 'stuff' of Creatura, matters that are ecologically organized and therefore largely aesthetic, include understanding the context of one's own underlying assumptions and existing paradigm. A recursive and non-exploitative science of emergent resonance does not hesitate to make the ecosophic commitment of becoming through bifurcations, of recreation through rupture.

« iii. The parasitic promise »

How important is it to have a metaphor uniting all the odds and ends of knowledge about trees into a whole that can sustain such love?

Mary Catherine Bateson[53]

We eat the bread of our mores; we drink the wine of our culture; we speak only the words of our tongue—I am speaking, of course, of unfit people like me. And love, I ask you: what about love between two people? Here, then, is the specificity.

Michel Serres[54]

The previous two sections of this chapter were used to simultaneously particularize and enlarge the vocabulary with which a 'new' science, accepted as *a history of the relations between ideas*, may confront the jagged depths of its own material stakes in a global state of precarity. The dyadic model of Creatura and Pleroma often employed by Bateson was introduced to emphasize the necessity of movement between (epistemically vulnerable) constructed meaning and physical reality, indeed the interface of what we posit as perceived-verbalized knowledge and quantifiable materiality. At a meta-level, however, I aimed to show the usage of metaphor, of descriptive and abductive modelling *in general*,

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[52]Gregory Bateson, *Mind and Nature: A Necessary Unity (*New York: E. P. Dutton, 1979), 15.

[53]Mary Catherine Bateson, "So What's a Meta For?" Angels Fear: Towards an Epistemology of the Sacred (New York: Bantam Books, 1988), 197.

[54] Michel Serres, *The Parasite*, trans. Lawrence R. Schehr (Minneapolis: University of Minnesota Press, 1980), 232.

as a generative process of its own, a matter of scientific rigour and material importance. From here I posit the semantics of Creatura—creatural communication fluent in relationships, dependent systemicities, and the tenacious persistence of radical alterity—as *parasitic,* as perpetually in-between, informationally chaotic, inevitably specific and particular. I rely heavily on Michel Serres' 1980 seminal text *The Parasite* to begin such a modelling of creatural communication, beginning with his attempt to model the biological parasite as intricately intertwined with the social parasite to conceive of *noise* —the redundancies of static and interference—as the parasitic characteristic of all dynamic and entangled systems. In Serres' words, "The theory of being, ontology, brings us to atoms. The theory of relations brings us to the parasite."[55] Furthermore, I concur with Anna Lowenhaupt Tsing's assertion that the problem of precarious survival helps us see the erroneous premises of the state of the larger system, and that precarity itself "is a state of acknowledg[ing] our vulnerability to others."[56] I attempt to articulate the model of the parasite at the cusp of both its violent and collaborative potentialities, in order to confront the "theory of relations," *epistemology*, in our current context of scientific, global and ecological precarity.

Batesonian cybernetic explanation returns again and again to the detrimental dissonance between verbal language developed to expediently seize Pleroma, and biological communication concerning patterns and relationships. Language, the system of articulation developed around nouns referring to things set in subject-predicate relations, has been a singularly radical invention for thinking about things, yet with such an invention emerges the capacity for erroneous reification. Bateson repeated throughout his life that there are no 'things' in Creatura—only ideas, relations between ideas, perceived images and maps faintly drawn in pencil. Yet there is a vast power of convenience conjoined with the ability to talk as though such ideas and maps—about the biological and social world, scientific truth, God, and so on—can be designated as distinct graspable

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[55] Ibid., 185.

[56]Anna Lowenhaupt Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton, NJ: Princeton University Press, 2015), 29.

things. Cybernetic explanation begins from recognizing metaphor as communicationally coherent with the processual emergence of biological and evolutionary development. That is, in metaphor, two propositions are set adjacent and corresponded to one another, the affirmative association made via juxtaposed proximity (instead of predication as in language). In metaphor, in biological process, it becomes impossible to separate subject from predicate within a given proposition. To speak of the world of the living and growing (my world, and yours), therefore, what we describe and reference must be met with a language that has no things in it but only relations and differences. This language of creatural communication would know of the mistreatment of ecological and interpersonal complexity latent in its own notion, simultaneously persevering still in modelling a critical relationship between epistemology and ethics.

At the crux of Bateson's definition of cybernetic language is its commitment to maps or rigorous metaphors in order to mobilize a technique of articulating and transferring conceptual models across predetermined coordinates. Because mapping can only exist in a realm of explanation specific to the mapmaker, that is, because the differentiation between the map that is made and the territory that is encountered is embedded in the scientist's very 'object' of study, what constitutes cybernetic explanation is a navigation of information—namely their redundancies and restraints. The concept of redundancy emerges when the mapmaker begins to consider how they could reduce or constrict the totality of maximum information in any given instance. Redundancy is employed to approach the vast chaos of noise with some sort of navigational understanding informed by the "collateral clues" of various patternings. Redundancy, therefore, is the word Bateson gives to the negotiating potential of patterning, that which bolsters the *predictability* of subsequent happenings within a larger aggregate of communicational events.[57] Redundancy and error, therefore, can only be a biological phenomenon (*i,e.*, communication *is* the creation of redundancies and patterning, particularized search patterns with which to frame meaning within noise). Bateson writes: "If then we say that a message has 'meaning' or is 'about' some referent, what we mean is that there is *a*

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[57]Gregory Bateson, "Cybernetic Explanation," *Steps to an Ecology of Mind* (Northvale, NJ: Jason Aronson Inc. 1982), 412.

larger universe of relevance consisting of message-plus-referent, and that redundancy or pattern or predictability is introduced into this universe by the message."[58] The science of cybernetics during Bateson's time broached this larger universe of relevance, meaning that its own limits could not be experimenting with computers to simulate communicational processes. Cybernetics could be situated as the scientific study of *noise*: noise as "the only possible source of *new* patterns."[59]

Michel Serres designates the parasite as conductor and producer of (physical, acoustic, informational") noise. The parasite, therefore, is the quintessential cybernetic entity, iconic of "the essence of relation" and the radical fact of interrelationality when speaking of operative life.[60] Like Bateson, Serres posits that noise is the sustaining presence of overlapping redundancies that may give rise to new patterns and therefore a new system, ordered by nodes of complexity at larger scales. Silence is presupposed as a material impossibility, for the white noise of the aleatory (the dynamics of entangled relations and their residuals) persists in being. It is the parasite that is at once responsible for the growth and termination of a system's complexity, existing in a frantic liminality described as "somewhat fractal, complicated in any case, so random that it is an individual, so serrated and notched that it is unique."[61] The parasite, then, functions as a creatural metaphor, completely and utterly existent because of the existence of relations and differences. The parasitic promise of Creatural communication, and perhaps Creatural science, is the capacity to incite differential change in the state of whatever system is under consideration. "The position of the parasite is to be between [within a system]"—so that its state of self-corrective equilibrium (homeostasis) does not atrophy into epistemological rigidity, and that its developmental or evolutionary trajectory (homeorhesis) does not suffer unchecked growth inflaming its own discernible

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[58] Ibid., 413.

[59] Ibid.,416.

[60] Michel Serres, *The Parasite*, trans. Lawrence R. Schehr (Minneapolis: University of Minnesota Press, 1980), 6; 109.

[61]Ibid., 233.

boundaries.[62] What makes such processes dynamic is that each organism operates in terms of its own priorities which are irrelevant to the reasons or understandings of the other. If the parasite is opaque to the host (or vice versa), unpredictability emerges—and thus possibilities of turbulence into new patterns.

Serres' description of the parasite verges away from an identitarian classification of an organism: *i,e.,* the parasite as creatural metaphor is not a 'thing' but a patterned class of knowledge that ventures into radical relationality, performing "not mediation but an intermediary… not necessarily useful, except of course for his own survival: this relation to the relation allows him to exist."[63] The parasite disturbs and interrupts; it is the annexing hinge of definitions prescribed to differently positioned individuals within a relational encounter. The parasite, by the very conditions of its existence, instigates a generative disorder between host and intruder, constituter and contaminator, interrupter and transformer. It exists only via the relation to the relation between distinct things, for the parasite is the 'site' of paradoxical and paranormal (paranormative?) excitement.[64] Serres' parasite is defined under the premise "contamination as collaboration" as posited by Anna Lowenhaupt Tsing: the emergent possibility of making othered worlds via collaborative entanglement, counting for each instance of specific and uniquely positioned encounter. Tsing writes: "Purity is not an option… Collaboration means working across difference, which leads to contamination. Without collaborations, we all die."[65] Furthermore, the parasite offered a reminder that the history of developmental change and biological-epistemological growth—of Creatural process altogether—is a history of unhinged contamination. Its being attests to an evolutionary track that is not naive or innocent in its epiphenomenal pollutions (*i.e.*, its *ongoing* history of colonial

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[62]Ibid., 230.

[63] Ibid., 109.

[64] Ibid., 38. "To play the position or to play the location is to dominate the relation. It is to have a relation only with the relation itself. […] And that is the meaning of the prefix *para-* in the word *parasite*: it is on the side, next to, shifted; it is not on the thing, but on its relation. It is always mediate and never immediate. It has a relation to the relation, a tie to the tie, it branches onto the canal."

[65] Anna Lowenhaupt Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton, NJ: Princeton University Press, 2015), 27-28.

genocide, ecosytemic exploitation, and other chronic violations of communicative networks of all types and scales).

Latent in the imaginary of the parasite is the malicious intent of a habitually exploitative agent, and explicit in its definition is the inevitable process of benefitting (surviving) via the nutrients of another's being. In Serres' words, a parasite "never nourishes its children. Otherwise it would be in the position of the host. A parasite defies itself from being parasite; the thing is there in all its simplicity."[66] The "simplicity" (which according to Whitehead, must always be distrusted) spoken about here is the unrestrictedly self-corrective quality characteristic of *complementary* relationships, as distinguished by Bateson in his anthropological studies of interpersonal and intergroup dynamics from *symmetrical* patterns of behaviour.[67] Bateson posited that fundamental to the idea of symmetry in relations is the extension of a notion of mirrored equilibrium, an rivalrous oscillation of positive feedback that would make the relationship prone to schismogenic (unchecked, runaway) growth. In other words, by identifying the feedback of symmetrical patterns as positive, as *uninterrupted by parasites of any kind*, the system would operate faster and faster to facilitate its growth. Insofar as symmetrical patterns continue to be unfettered by gaps, divergences, incongruities, it would work towards the edge of its own limitations—whether such a *disruption to the status quo* was desired or not. Yet models of complementarity (*i.e.*, "dominance—submission, exhibitionism—spectatorship, succoring—dependence"), would instigate a coordinated integration where the behaviour of *x* fit in with but was not the same as that of *y*.[68] Complementary patterns of behaviour would limit or redirect exponential progressions towards a maintenance of a steady state—whether that *maintenance of homeostasis* was desired or not. The parasite, then, is a disruptive, corrective phenomenon that chaotically defies any standard of desirability; it is inevitable insofar as it is indifferent to ethical consequence. At the same

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[66] Michel Serres, *The Parasite*, trans. Lawrence R. Schehr (Minneapolis: University of Minnesota Press, 1980), 131.

[67] Gregory Bateson, *Naven* (Stanford University Press; 1 edition, 1958).

[68] Gregory Bateson, "Cultural Problems Posed by a Study of Schizophrenic Process," *A Sacred Unity: Further Steps to an Ecology of Mind*, ed. Rodney E. Donaldson (New York: Harper Collins Publishers, 1991), 112.

time, however, the parasite is utterly imbricated in its particular relations, the condition of intersubjective irreversibility that allows for its capacity to parasite the other in the first place.

The parasite, then, is a model of intensifying specificity. The parasite enters the body of its host in order to infect it with itself, yet the metric of this infectious power is its capability to adapt itself to this other, to participate in their shared porosity, to know of the other in all of its otherness. This is the paradox of the parasite: it *loves* insofar that it cannot exist without the specificity, the intimacy of *this* particular, exceptional relation. Serres writes: "The position of the parasite is to be between. That is why it must be said to be a being or a relation. But the attribute of the parasite, until now not mentioned, is its specificity. […] How is it that I love you; you, among a hundred thousand, me, and not another? Is it an illusion: is Don Juan's catalogue a wiser way of doing things?"[69] The parasite cannot be a viral presence amidst a general mass of hosts; the parasite must enter into the proximity of its host other, particularizing the potential randomness or variability of the encounter by demanding participatory exchange. Participation (the intimacy of differential specificity, the abandonment of individuality and ontological solidity for the relation) is part of the parasitic promise, that which excites and endangers steady states of information, of kinship, of biological life. Indeed, "How is it that I love you?" could be another variation of the Riddle of the Sphinx, a disturbing, yet generative question of organic and epistemological viability.

In a critical examination of coevolutionary processes and coconstitutive companion species, Donna Haraway writes that "…love kills, unconditionally, both kinds and individuals."[70] By occupying both complementary and symmetrical dynamisms of interrelationality, the parasite highlights the problematic fantasies of a perfect, identic mutuality in intersubjective encounter. Haraway notes that an ideal of "equality" does not

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[69] Michel Serres, *The Parasite*, trans. Lawrence R. Schehr (Minneapolis: University of Minnesota Press, 1980), 230.

[70] Donna Haraway, "The Companion Species Manifesto," *Manifestly Haraway* (Minneapolis: University of Minnesota Press, 2016), 131.

equate and has not ever equated to "the conjoined dance of face-to-face significant otherness."[71] The history of coconstitutive companionship is always, to some degree, also a history of dominance, domestication, and asymmetrical disparity. Yet perhaps it is the primary task of the articulations of science, of any Creatural (inter)discipline, to understand and critically reflect upon the fraught state of intersubjectivity as its very subject matter. Bateson's 'definition' of love offers such an illustration, of demonstrating cybernetic description as a scientist *and* conducting its unseen and unquantifiable resonances outside of the laboratory:

> At least a part of what we mean by the word could be covered by saying that 'I love X" could be spelled out as 'I regard myself as a system, and I accept with positive valuation the fact that I am one, preferring to be one rather than fall to pieces and die; and I regard the person whom I love as systemic; and I regard my system and his or her system as together constituting a larger system with some degree of conformability within itself.'[72]

Bateson posits that the logical organization of love—if it is to confront its entanglements with fantasies of mastery and minimize its casualties—follows the logic of metaphor: the potential of insight through proximal relevance, patterning out a way to know of the self, the other, the self-and-other, and the self-and-other-in-environment *without* a collapse of differentiation and scale. In Mary Catherine Bateson's words, what is at stake is "the evocation of self-knowledge as a model for understanding another, because of similarities or congruences that make the knowing possible."[73] The 'self,' my compounded psyche and soma, demonstrates the interface of Creatura and Pleroma at a scale corporeally tangible.

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[71] Ibid.

[72] Mary Catherine Bateson, *Our Own Metaphor* (Washington: Smithsonian Institution Press, 1991), 279-280.

[73]Mary Catherine Bateson, "So What's a Meta For?" Angels Fear: Towards an Epistemology of the Sacred (New York: Bantam Books, 1988), 194.

Because nothing in the embodied world is external to the self, because my epistemology should not be delimited to arbitrary boundaries, and because my life is not a clinical procedure, my own body (its positionality amidst the noise) will attest to the fluency with which I explore my own beliefs, biases and desires, the information I take and hold onto as true. Whatever "I" posit as progress within the discipline I partake in, I will also participate in a recursive history, fissured and injured by its own porosity. And as Bateson reminds us, any entity that participates in and is constitutive of a recursive system is confronted with the radical idea that it is of the same (or at least complementary) stuff of its environment; therefore, "all recursive systems contain the beginnings of self-reference, or, shall we say, selfhood."[74] A relevant yet distinct notion is Serres' designation of 'the self' as a tessera, a complicated, archival, compounded structure that multiplies in its emergent fractality. The tessera "is an individual; it is chance, it is complex; it is a memorial"[75]; it is that which asks the Sphinx's riddle in as many variations as possible. Among them is the aleatory question "Who am I?," its repeated enunciation constituting a whole way of being. This tessellated self is unabstracted from the experiences of difference and interaction; it does not assert itself as a 'thing' nor does it pretend to exist without relationship. The self as tessera is inevitably unique, suffused and teeming with informational noise, an emergent promise of remembrance, of residual longing. And as such, it would be impossible to experience or know of another without the simultaneous observation of what sort of person *one is oneself* during the encounter. Such a process may articulate and gesture towards something like this: "My body is a memorial. […] My whole body is a memorial of you. If I love you, I remember you."[76]

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[74]Gregory Bateson, "This Normative Natural History Called Epistemology," *A Sacred Unity: Further Steps to an Ecology of Mind*, ed. Rodney E. Donaldson (New York: Harper Collins Publishers, 1991), 223.

[75] Michel Serres, *The Parasite*, trans. Lawrence R. Schehr (Minneapolis: University of Minnesota Press, 1980), 233.

[76] Ibid.

2. The Necessary Existence of Residues

« *Metalogue: Broken open* »

Patient: Tell me something that's real.

Doctor: That is not for me to tell.

P: Look at the framed pieces of paper on your walls, your business card, that white coat. You made a career out of telling people what is real and what is not. I need you to do the same for me.

D: I could tell you that everything that you see and feel and think in your head is fiction, and list here in my notes all the symptoms that I think you are experiencing. I could write in bold that you have impaired judgment, self-destructive tendencies, affective pain, and so on. I could tell you forgo the messages your brain is sending you, to refuse to believe in your own sense of self, your own perception of things. I could tell you that this chair is real, violence and love is real, and that the potential for healing is real. But I would not be *saying* anything real, and I would not be *telling* you anything. This white coat does not grant me infinite or any other access into your mind and heart. I cannot prescribe reality for you with my words, no matter how ardently I tried, so perhaps we should shift the question with which to begin relating.

P: Okay then, Doc, how do I get better? What can I say for you to determine me as normal as you? Tell me what I should do; at this point, I'll do anything.

D: I am not here to interrogate you, or to impose imperatives onto you that may threaten or guilt you in to changing your thoughts and behaviours. There is no test, no game.

P: What is this all for then?

D: I am here to observe, and therefore participate in, the things that we convey to each other for whatever reason. So maybe we can start by trying to convey the emotional experiences that brought you here, and I will be your witness and try to respond as best as I can.

P: Well, I am in a lot of pain.

D: Can you be a little more specific?

P: Nothing feels real because the world feels too close to me. I want to embrace it with my entire body, and it hurts to realize that this may then distance or suffocate the world away from me. I am left feeling discarded and cast aside, nonessential and wearying to the world that I feel too close to. I am not real to the world, and what I thought was real between the world and me never was. I desire closeness to the point of its impossibility. I believe too deeply in my own fiction.

D: Your words, to me, describes a problem that resonates into a realm of scientific inquiry far beyond the confines of this context, this moment in time. The fact of intercorporeality and relationality is never easily understandable. Yet I believe this to be the very problem that science as a whole must reckon with if science is to match and meet with its exceedingly human, relational, fleshy demands.

P: Whatever you say, Doc.

D: My apologies. What comes to my mind in this present moment is that we all believe in our fictions, to some extent. This is not to devalue or invalidate your pain, but it is true that the stories and fantasies that we make to be a part of the world have scrambled and agitated and propagated human thought into territories good and bad, and everywhere in

between. How would you describe the territory your fiction has consciously dared to tread?

P: Nothing remains solid. Ever since I was a child, I made a habit of relying on my secret fantasy life to rescue me from tedious or tormenting surroundings—and it worked. The bite of my mind, the unfolding story-world it sought to construct and maintain, offered me a sanctuary from everything I perceived to be potentially unideal or dreadful. But my fiction began to grow and flow out with a mind of its own, engulfing the entirety of my being, my ability to stay in control. I was an enthralled puppeteer with the most nimble and dexterous fingers you've ever seen, creating the most marvelous spectacle with which to feel alive. Then suddenly, or eventually, or without a sense of order at all, my fingers completely numbed, and the strings that they once grasped melted into the puppets that realized they too have a mind of their own. The puppets turned their mocking gaze back to me, demanding that I reckon with the myth of control that I once relished and reveled in. They laugh at my impotence, at my romantic fantasies and enthusiasms, my feelings and desires, and I was left immobile as they proceed with their total conquest, beginning at the level of my own perception of myself. I have not left there ever since.

D: What do you think will happen if you give into the puppets' reign?

P: I will no longer be of this world with you and this chair and this carpet and tea.

D: What would you think or feel if you rejected it all together?

P: If that was even a possibility, I would be unbearably broken open.

D: Why is that unbearable?

P: I have never been without my fiction, *a* fiction with which to retreat from the world. My mind turning on me and actively ensuring that I no longer have agency over my own mind is, at the very least, a fiction too. The puppets may be mean and violent, but they are still my company. The loss I would feel if they were to disappear… even the thought threatens to undo me. Does this mean that they make me plural?
What is unbearable is the prospect of being left alone with my own thoughts, in my own company, without a promise of another extending their presence to alleviate the weight of mine.

D: So neither option is really viable in this situation. It seems that there could be a third option we can begin to explore here. Is hate the only emotion strong enough to reverse and remedy the intensities of love? What would the middle ground between wholesale acceptance and total denial of your fiction look like?

P: I wouldn't know where to begin describing such a thing. I have no grasp of reality, let alone the ability to articulate what it may entail.

D: I am not sure either, but I will say that there is plenty of violence enacted in the name of reality, and what is made to function as reality in such a designated context. What you are feeling cannot be equated with an articulation, but perhaps it is at a feeling level of the body that we may begin to articulate *from* it. In articulating the impossibility of equating what is going on with linguistic renderings, no matter how eloquent and complex they may become, perhaps we gain access into a few more complex patterns, patterns that allow for the fluency and flexibility with which to return to the articulation at another vantage point. Language is in some sense just the surface output of intent to express meaning. It only makes sense if seen as part of a larger communication system beyond the cognitive to feeling, gestural expression, tone of voice…

P: My stomach hurts. The puppets are starting to feel cramped.

D: Perhaps that is a necessary step towards breaking through, without breaking open.

P: I guess I do deserve this discomfort. What is the asylum other than a cage in which one's pain tolerance is endlessly tested…

D: I wonder what the value in thinking that might be. My heart hurts to notice that the 'psychotherapy' you've been exposed to does not know better than to posit a mastery of knowledge of your lived experience as the cure for what you may confront as a fact of life. For whatever its worth, I am here to tell you that such a model is, at best, unproductively reproductive of the same punitive model that has bound you from the beginning, and at worst, actively fueling an apparatus of violence that extends its reach beneath and beyond this room, and us.

P: The puppets will not cease their noise with discipline, God knows I've tried. I have attempted to mimic what I learned from this place where I am told that my body, every sliver of my time, actions, and behaviour, is abnormal and wrong—and therefore must be besieged and codified into the doctor's analysis. I tried exerting power over the puppets like so, and have succeeded only in amplifying their assaults. So excuse me Doctor, if I have difficulty in believing in your altruism.

D: That may well be the case. I cannot demand your trust when it has been habitually abused by people in my position. There is nothing therapeutically valuable in collapsing the scales and nuances of how we think and speak of yourself and the puppets, in psychological and sociological discourses as a whole, for the sake of intellectual or institutional power. The syllogism must be rewritten.

P: What a lovely thing to believe in.

D: I have spent my career trying to articulate this to patients, colleagues, and administrates. Sadly, but hopefully, I am not surprised that the patients only seem to

understand this, at a material, bodily level. Power impairs those who insist on it. And yet, how untrusting these words may seem to you, by the natural function of the context we have met in. I have the hospital's machinery inscribed on my own body and have only words with which to try and communicate to you otherwise. Knowing how vapid and mercurial these words may sound, perhaps I can say that the sole reason I am here with you is to facilitate, and perhaps help you to navigate your own process of healing, whatever that may mean for you.

P: I don't know what to think, let alone what to say. This painful incoherency has become my state of living.

D: What is your body telling you?

P: That this cannot go on.

…

P: So Doc, did I pass therapy?

D: Therapy is nothing more than an instance of an interpersonal relationship. It cannot be passed and failed insofar as we have spent this time together talking to one another.

P: But did we *get* anywhere?

D: I do not have access to the metric deciding that.

P: Nevertheless, we should try again next time.

« i. The (therapeutic) double-bind »

We see each other always with distorted eyes.

Gregory Bateson[77]

Anyone who is offended by this, I really encourage you to leave your body.

Nao Busmante[78]

A young woman hits a point of crisis and ends up in the inpatient psych ward of a university hospital. After nine hours in the ER, a grim hospital turkey and mayonnaise sandwich she was forced to eat, four nurses and two doctors asking her the same questions, she waits for the psychiatrist to come do the same. She is thinking about her family, how tired she is, how dirty the bathroom is, and when all this will come to an end. And what she would do at that end, if she were to remain the same. The doctor finally enters the room. He walks in, leaves the papers and clipboard he was carrying by the door, holds out his hand and introduces himself. He ignores the chair across the room and chooses to lean on the counter adjacent to her bed. He stretches his arms out and back and lounges, as if he was there to hang out and wanted to ask if she'd like to split a pizza.

He says something about what an awful day she must be having. She shrugs. He asks routine questions, details about what the medical student that came in before him took notes about, detail about her life, her childhood, her family, her thoughts. He tries to respond to each answer at the scale of his own experience. "Immigrant families, hey? I come from one too," he says, when she has a difficult time explaining that her parents and grandparents have a different notion of mental health altogether, that they always believed that anything can be cured with determination and will and discipline just like how they survived all their hardships in life. He then prefaces his next question with:

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[77] Gregory Bateson, *Angels Fear: Towards an Epistemology of the Sacred* (New York: Bantam Books, 1988), 168.

[78] Maggie Nelson, *The Art of Cruelty: A Reckoning* (New York: W. W. Norton & Company, 2011),

"You might think I'm a complete asshole after this one, but please bear with me." He asks her if any members of her family has died because of suicide. She replies no, expecting that he would cross off that box in the family mental health history category. He then asks her if she knew what a risk factor was, which she replies indeterminately that she does, but probably not exactly in the way that he intended. He explains that a risk factor is a thing that increases the risk of another thing, making something 'more likely'; cigarettes are a risk factor for heart disease, alcohol is a risk factor for suicide, as is being poor, a white male, and socially isolated. He continues, saying that the one incomparably greatest risk factor for suicide, however, was having a history of suicide in one's family. "Why I am telling you this when I've got already got an answer from you," he said, "is because the next time you consider taking your life, think of how greatly you are impacting your family's chances of killing themselves."

This doctor has put the patient in what Gregory Bateson and Frieda Fromm-Reichmann called a "*therapeutic* double-bind." A notion of strategically and deliberately constructing a double-bind in hopes that it may facilitate for the bound individual their escape from the original one presupposes the double-bind of medical 'benevolence.' Because clinics exist for the benefit of various faculty, administrative staff, and executives (almost always disproportionately) along with the patient, there will be a kind of slight-of-hands employed, deliberately or structurally, that categorizes actions taken and decisions made as 'benevolent' for the patient when actually they are intended to maintain bureaucratic policy and keep personnel more comfortable. Bateson cogently writes: "We would assume that whenever the system is organized for hospital purposes and it is announced to the patient that the actions are for *his* benefit, then the schizophrenogenic situation is being perpetuated."[79] Emphasizing on Bateson's identification of schizophrenia as a *situation* (as opposed to an individual or a patient), the double-binding nature of such institutions may be defined as a structure perpetuating *a bodily and linguistic denial of agency* in order for it to remain unaffected. In other words, any attempt at verbalizing this

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[79]Gregory Bateson, "Towards A Theory of Schizophrenia," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 225.

systemically perpetuated deception on the patient's part will inherently be framed as "schizophrenic," in the sense that it will usually be indirectly laden with metaphors and other symbolic knots and densities, and will ultimately be left unable to comment on his situation as being deceived. The positioning of therapeutic double-binds as potentially restorative and productive presumes the fact that double-bind situations are actively being created by and within the psychotherapeutic setting and the hospital milieu, before and beneath the level of the individual psychopathology.

It is from scrutinizing the psychiatric institution *as* the architecture of double-binds that I will begin unravelling double-bind theory as a tool for constructing a model of transcontextuality, and the body as a duration of metacommunicational, syntactic relationality entangled with larger networks of porous corporealities. Studying the intercorporeal and interaffective dynamics of psychotherapy may provide ground for defining and complicating the metric with which to measure its 'success.' Simultaneously, however, psychotherapy as a clinical practice is inevitably emergent from institutional hegemony and its structural-epistemological constraints. From this ongoing tension, I presuppose that the psychiatric institution, therefore, is inherently a *carceral* space, insofar as the subject in question is bound to the psychiatrist and the tokened validity of her knowledge as a figure of institutional, and therefore sovereign/ disciplinary power. It is also, however, a *caesural* space, insofar as participation in its duration marks a pause from the predictable pattern of one's daily life, as well as a potentially necessary interruption from the affectively arduous task of reckoning with one's own difference as an individual isolated by premises such as: 'I am responsible for my pain,' or 'I do this to myself.' In Kay Redfield Jamison's personal words: "Psychotherapy is a sanctuary; it is a battleground; it is a place I have been psychotic, neurotic, elated, confused, and despairing beyond belief. But always, it is where I have believed—or have learned to believe—that I might someday be able to contend with all of this."[80]

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[80]Kay Redfield Jamison, *An Unquiet Mind: A Memoir of Moods and Madness* (New York: Vintage Books, 1995), 89.

Bateson coins the term "*transcontextuality"* to describe the somatic application of double-bind theory as a "genus of syndromes" characteristic of the sort of communication and contact emerging in recursive systems, from the patient-therapist-institution system to the social or ecological system at large.[81] The transcontextuality of double-bind theory lies in precisely this understanding that categories of normativity and pathology are profoundly entangled by way of the very process of identification that seeks to maintain them. Bateson writes: "Double-bind theory asserts that there is an experiential component in the determination or etiology of schizophrenic symptoms and related behavioural patterns, such as humor, art, poetry, etc. Within its terms there is nothing to determine whether a given individual shall become a clown, a poet, a schizophrenic, or some combination of these. We are not dealing with a single syndrome but with a *genus of syndromes*, most of which are not conventionally regarded as pathological."[82] The prescient insight that Bateson comes to in this moment is that such workings of 'binds in the mind' are not an eternal damnation to unreality, nor a machinery of diagnostics meant to identify particular bodies, but the pith of *all* human learning processes. These binds in the mind attest to the recursive, etiologically and ecologically complex nature of mental process *in general*, which may manifest in a particular corporeality as experientially painful, debilitating, confusing, etc. (*i.e.* schizophrenogenic), or experientially delightful, joyous, or meaningful (*i.e.* aesthetic experience, laughter) in another. To begin navigating the utterly volatile and context-dependent nature of double-binds requires an understanding—at some level of epistemological resonance—that a model of mind claiming unmediated, indifferent, neutral perception of what is going on is in actuality mired in arcs of power and mastery to the point of fallaciousness. Any sort of rapture or disturbance in the psyche, therefore, attests to the human impossibility of solipsism. The study of schizophrenia and the double-bind, then, "cease to be matters of individual

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[81] Gregory Bateson, "Double Bind, 1969," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 272.

[82]Ibid.

psychology and become part of the *ecology of ideas* in systems or ‘minds' whose boundaries no longer coincide with the kinds of the participant individuals.”[83]

A story that Bateson was fond of telling to describe the etiology of the double-bind and its ‘therapeutic’ potentiality was Dr. Frieda Fromm-Reichmann’s demonstration of deliberately constructing a double-binding communicational sequence with one of her patients experiencing severe schizophrenia from a young age.[84] This patient was Joanne Greenberg, who became the author of the 1964 fictionalized autobiography *I Never Promised You A Rose Garden* published under the pseudonym Hannah Green. She documents a young woman’s break with reality, and the eventual process of her therapeutic engagement with a “Dr. Fried.” In the novel, Deborah is a young woman who has built a hierarchy of gods in a complex system of political power that constructs reality for her. She expresses her hesitancy towards therapy to Dr. Fried by saying: “God R says I shouldn’t talk with you.” Dr. Fried/Fromm-Riechmann replies, in Bateson’s somewhat offhand narrative rendering: “Look, let's get something into the record. To me God R doesn’t exist, and that whole world of yours doesn’t exist. To you it does, and far be it from me to think that I can take that away from you, I have no idea what it means. So I’m willing to talk with you in terms of that world, if only you know I do it so that we have an understanding that it doesn’t exist for me. Now go to God R and tell him that we have to talk and he should give you permission. Also you must tell him that I am a doctor and that you have lived with him in his kingdom now from seven to sixteen—that’s nine years—and he hasn’t helped you. So now he must permit me to try and see whether you and I can do that job. Tell him that I am a doctor and this is what I want to try.”[85] In the novel, this moment is prefaced by a conversation with Deborah’s usage of Yri, the language spoken on the territory of her gods. Dr. Fried wonders why she must use this

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[83]Gregory Bateson, “Comment on Part III,” *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 339.

[84]Gregory Bateson, “Towards A Theory of Schizophrenia,” *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 226-227.

[85]Gregory Bateson, “Towards A Theory of Schizophrenia,” *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 226.

language, when she is so competent in English, to which Deborah replies: "English is for the world—for getting disappointed by and getting hated in. Yri is for saying what needs to be said."[86] The conversation then continues as such:

> "I beg your pardon," the doctor said. "I am perhaps a little jealous since you use your language to communication with yourself and not with us of the world."
>
> "I do my art in both languages," Deborah said, but she missed the threat of the doctor, and the claim she was putting on the communication.
>
> "Our time is over," the doctor said gently. "You have done well to tell me about the secret world. I want you to go back and tell those gods and Collect and Censor that I will not be cowed by them and that neither of us is going to stop working because of their power."[87]

Dr. Fromm-Reichmann develops a double-bind to confront her patient with, the patient who is *already* caught in a double-bind with the gods in her head. If the doctor's overt acknowledgement of and challenge to God R allows the patient to be rendered doubtful of God R's legitimacy, then she is agreeing with the doctor that his reign is questionable, and indirectly admitting in turn the praxis of therapy as valid. If she ignores the doctor's challenge and insist that God R is real, then she must actually "go to him" and tell him that this doctor is more powerful that he is—again, operating within the same context of involvement with the therapist. Fromm-Reichmann's brilliance in this moment lies not in attempting to be 'benevolent' to the patient, but that she is appealing to and agitating her patient's creativity, in order for her to effectively understand that this situation with the doctor cannot begin to be helpful if the voices of the gods still dominate the soundscape of her mind. The doctor's response is intuitively calibrated to simultaneously validate the

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[86] Hannah Green, *I Never Promised You A Rose Garden* (New York City: Henry Holt & Co, 1964), 62. Within the context of this thesis project, perhaps we can construe this tension as parallel to needing a new language for theory.

[87] Ibid., 62-63.

patient's experience *and* to help aid in reorganizing or restructuring such patterns of experience in a way that tethers the patient and her own sense of self back to the ground. Greenberg describes *I Never Promised You A Rose Garden* not as a case study in the strain of Freud's *Dora*, but as "a hymn to reality." She centralizes the oscillatory dynamics of the relationship between the young woman and her doctor as its primary subject matter, as a processual development of trust and mutual understanding emerging through their conversations is perceived throughout the text. Concurrently, Dr. Fromm-Reichmann's technical primer *Principles of Intensive Psychotherapy*, published four years before the novel, begins with a reflexive analysis of the *psychiatrist's* positionality, including their personal and professional requirements that may be conducive towards or inhibiting of the whole psychotherapeutic process. Fromm-Reichmann defines the psychiatrist as a "participant observer," one whose personality, as much as the patient's, can only ever be understood by way of interpersonal relationships, and with this knowledge, "facilitate the accession to awareness of information about interpersonal problems and difficulties which will help to clarify for the patient the troublesome aspects of his life and ultimately to resolve his sympotomatology."[88] Mental process is unalterably an interpersonal process, and psychopathology is always on some level a dis-ease of patterns of relationships. Particular to schizophrenic communication is the patient's inability to comment upon or explicitly acknowledge information and message exchange *about* the interpersonal situation they are implicated in with the therapist; in other words, they are ensnared by a metacommunicative tangle that compels them to complicate or 'redress' their words when speaking about the pathogenic and often painful experiences at hand.

Bateson writes that although the experience of a double-bind is often devastating and traumatic, double-binds are also integral to systemic growth and change, for "a gross disruption of the total system may be necessary to prevent the production of the

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[88] Frieda Fromm-Reichmann, *Principles of Intensive Psychotherapy* (Chicago and London: The University of Chicago Press, 1960), xiv-xv.

previously adaptive characteristic."[89] To navigate such territory of taut contradiction, the schizophrenic's primary mode of communication adopts a dissociating, fictional, and/or repressing mode of verbalization and narrative construction. Metaphor becomes a method and tool for epistemological coping when confronted with knots of communicational paradoxes. The task of the psychiatrist as a participant observer is to decode, recontextualize, translate—that is *interpret*—such communications that are otherwise perceived and accepted as indecipherable 'word salad.' For Fromm-Reichmann and Bateson, such a tasks entails a process of "learning about learning" *on the part of the therapist*: a multiordinal, meta-level engagement with the patient's entangled interpersonal situation at hand—whether in the larger pattern of relationships in the patient's life or the inner relationships of the patient and their covert reveries—so as to imagine and organize counter-adaptive double-binds. First and foremost, the relationship between the therapist and the patient cannot be excluded from such a system of resonant intersubjectivity.

Both Fromm-Reichmann and the doctor in the prefacing dialogue of this section frame their primary task as clinicians as engaging with the constructions of therapeutic double-binds. The doctor in the anecdote anticipated the patient's expectation of the message of his own question, covertly played along with it, and deftly turned it on their patient's head. In a split second, the patient was confounded with something truly and profoundly unforeseen. Her response in the story starts from a fixed and assumed certainty of having no suicides in her family; she thinks there is no predisposition on her part so her attempt is more of a mortifying anomaly to her, and she remains spiraling in a self-condemning pattern of thought. This quickly dissolves when the therapist takes a disruptive turn, framing the situation back onto the patient so that she envisions *herself* as that very member of the family that sets a context for more violence and heartbreak via her fatal act. She is then mortified at a deeper or higher level, and is jolted into thinking in terms of how she will *not* endanger her loved ones, and therefore herself.

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[89]Gregory Bateson, "The New Conceptual Frames for Behavioural Research," *A Sacred Unity: Further Steps to an Ecology of Mind, ed. Rodney E. Donaldson* (New York: Harper Collins Publishers, 1991),102.

These therapists have constructed ‘tricks’ that release the patients from their preexisting conceptions of ‘self,’ and nudge them to enlarge the scope of their thinking outside of the impasse they are stuck in. Neither of the cases explicitly impose the desired outcome onto the patient (*i.e.* therapist explicitly saying some kind of version of ‘your way of thinking about such and such is wrong and causing you to be in danger’), but allows for the patients to *participate in a fantasy*, a what-if scenario that teaches or gestures towards something at the crux of their situation in-the-territory. Deborah must imagine the terror of confronting God R about his rule, the woman in the anecdote must imagine what it would be like to leave the world leaving nothing behind but risk for her family.

This element of fantasy and play is at the crux of thinking about the therapeutic potential of double-binds. The experience of imagining oneself in a scene where the epistemological and communicational invasions we all encounter in life are indeed maneuverable and bearable is potentially an integral part of what Bateson calls the "characterological growth" of a system, whether that system is a single human body or a group of people or a society at large.[90] This is perhaps what he means when he posits art, dream, and fantasy as necessary precursors towards encountering the systemic nature of life, and the dynamic praxis of psychotherapy processually defining itself as “a context of multilevel communication, with exploration of the ambiguous lines between the literal and metaphoric, or reality and fantasy.”[91] The therapeutic double-bind creates a revised context in which messages that were contradicted and negated by the original bind is reorganized and remediated towards ‘meaning.’ Neither objective truth nor hallucination, the ‘meaning’ that may potentially be gleaned from such an experience is that it may illuminate to the patient-therapist system the ‘formal’ problems of having to forge contact

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[90]Gregory Bateson, “The New Conceptual Frames for Behavioural Research,” *A Sacred Unity: Further Steps to an Ecology of Mind, ed. Rodney E. Donaldson* (New York: Harper Collins Publishers, 1991),102.

[91]Gregory Bateson, “Towards A Theory of Schizophrenia,” *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 224. “The entire field of fictional communication, defined as the narration or depiction of a series of events with more or less a label of actuality, is most relevant to the investigation of schizophrenia.”

with reality necessarily through multiple levels of message exchange akin to fiction, fantasy, and art.

Double-binds are structures that depend on a dynamics of (seemingly) inescapable runaway; that is, they must necessarily cycle to reproduce its patterned sequences over and over again in order to continue exerting its original function. Any act of interruption or disruption of a system in runaway will necessarily entail discomfort that may be overwhelming, but which does not have to be traumatic. In other words, the task of the psychiatrist becomes one of providing relief in the rigid rules of the clinical interaction that they must nonetheless occupy. Without such paradoxes, without such willingness to be flexible in a preformed structure or institution, the unfolding nature of relationality and communication would be stifled and stagnated. Change and humour, play and experimentation would be able to function as shared gestures of solidarity or rapport in a process of mutual double-binding that the therapeutic process may demand. Such flexibility of interaction also allows for a flexibility of interpretation; the therapist must glean meaning that does not invalidate their communicative value and relevance from the message material of the patient. As Bateson writes: "The psychosis seems, in part, a way of dealing with double-bind situations to overcome their inhibiting and controlling effect. The psychotic patient may make astute, pithy, often metaphorical remarks that reveal an insight into the forces binding him. Contrariwise, he may become rather expert in setting double-bind situations himself."[92]

Bateson offers a succinct definition of the double-bind as: "The experience of being punished precisely for being right in one's own view of the context."[93] Double-binds are always interpersonal, *i.e.*, entailing the concurrent participation of two or more individuals. They are also the byproduct of repeated experiences, *ie.*, a *recurrent* theme in the experience of the victim, a body of traumata that structures habitual expectation of

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[92] Gregory Bateson, "Towards A Theory of Schizophrenia," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 221.

[93] Gregory Bateson, "The Group Dynamics of Schizophrenia," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 236.

dissonance, pain, violence, etc. This means that the victim of a double-bind enters into a space of 'paranoia,' of perceiving the double-bind even when it may not be there. This paranoia feeds an endless reproduction of the same double-bind at the very level of primary epistemological injunctions, inflicting messages of punishment and discipline for acting precisely in the way that the double-bind has intended. The impossibility and insanity of such a bind is pithily expressed in the doubled statement: "(If you) Do not do so and so, or I will punish you."[94]

The radical wisdom of the *therapeutic* double-bind, however, lies in this recognition that the self-expression of the victim is (self)-policed by the threat of punishment, a threat that operates through pervasive forms of systemic constraints and oppressive structures of invalidation. The injunction that informs the individual how to or how not to act is fundamentally at odds with another secondary injunction that is imposed, which implicitly or explicitly prohibits the victim from even acknowledging, let alone escaping, the double-bind. The double-bind is 'completed' when the victim has learned to perceive his universe exclusively in double-bind patterns, *i.e.*, any inkling of the existence of the double-bind (which is now 'reality') may be sufficient to induce affective disturbances of panic or rage. In other words, *knowing the criteria for a double bind is insufficient as a method of protection or self-defence from feeling the painful affects of the double-bind*. The fundamental logic of the therapeutic double-bind operates with the understanding that human experience and perception tend to become entrenched in their own traumata, and therefore the double-bind cannot be identified or "cured" by way of a prescriptive logic. Instead, the premise adopted is that the double-bind can be *repeated* into a higher order of awareness, towards constructing what Lauren Berlant calls "an impossible, but no longer unliveable, situation."[95]

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[94]Gregory Bateson, "Towards A Theory of Schizophrenia," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 206.

[95]Lauren Berlant, *Cruel Optimism* (Durham, NC: Duke University Press, 2011), 53.

To finish the dialogue that began this section: after stating that his “guilt trip moment” is now over, he tells her that her life is “meaningful, irreplaceable, and connected by the people that would be devastated if she were gone.” And repeats again, with words, that these are not just words. He looks into her eyes and tells her something that will change her for the rest of her life, although it may not be conscious to her all the time: “Every time you think you are worthless or disposable,” he said, “think of how your family and friends would feel about that, and how they are affected.” He explained to her his plan, saying that he is not going to give her a “diagnostic name tag” and a pill prescription, that he cannot and will not presume to “chemically cure you of your stresses.” He will do his absolute best trying to find a network of people in her school and community that will help her but emphasizes that she has to be willing to try, willing to come back again. He tells her that he has two years left in his residency so he cannot be her regular doctor, but that she should come find him if a crisis happens again because he cares about what happens to her.

This is a personal story of how one individual began to seek therapy. This interaction did nothing to change the state of her body as it was just words, or more broadly messages exchanged. She was left, however, feeling the weight of something—simultaneously, gradually, suddenly—being lifted from her head and chest. One doctor, an overworked junior psychiatry resident who cared enough treat this young woman not as another rotation to complete, but as a person in a difficult bind, allowed her to feel for the first time that she could trust the person across from her (or more precisely next to her) in a clinical setting. If there is any meaning to be gleaned from such an encounter, it would perhaps be that there was at that time, and therefore is still, the residual potential for real healing.

« ii. The syntaxic body, an anomy of the norm »

For those of us living with severe mental illness, the world is full of cages where we can be locked in. My hope is that I'll stay out of those cages for the rest of my life, although I allow myself the option of checking into psychiatric ward if suicide feels like the only other option. I maintain, years later, that not one of my three involuntary hospitalizations helped me. I believe that being held in a psychiatric ward against my will remains among the most scarring of my traumas.

Esmé Weijun Wang[96]

There is no music in the asylum. There is only noise, fractured parts that may be heard as slivers of meaning, launching one's body into an untranslated potential, a heightened awareness of one's own skin and shape. The patient may attempt a process of assemblage, to put these parts into some identifiable relation, and perhaps then she can begin to call this situation as what it is. She wishes to be bound to the noise, these isolated entities. She wants to live a life committed to the construction of meaning, no matter how constructed. But where does the music lie? Surely these parts, these few simple chords cannot *cause* the strange otherness that she feels on the skein of her body. The only possible source of difference is in some sort of complexity. What she feels to be strange and otherworldly is always rooted on the ground, emergent from a complex pattern of material activities that is anything *but* supernatural.[97] The magic behind magic, the vibratory resonances behind vibration, lies beneath and beyond one's visibility. The panoptic gaze of the asylum can fix her in her place, while she forgets what it feels like to stand on solid ground, what it is like to exist without the endless paranoia of existing. One cannot *see* the music in such a place.

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[96] Esmé Weijun Wang, *The Collected Schizophrenias: Essays* (Minneapolis, Minnesota: Graywolf Press, 2019), 110.

[97] Douglas Hofstadter, "Pattern, Poetry, and Power in the Music of Frédéric Chopin," *Metamagical Themas: Questing for The Essence of Mind and Pattern* (Basic Books; Revised ed. edition, 1996), 174.
"The magic behind magic is pattern. The magic of life itself is a perfect example energizing as it does out of patterned but lifeless activities at the molecular level. The magic of music emerges from complex, nonmagical —or should I say /meta/magical?—patterns of notes."

In summary, the first section arrived at the premise that the effects of a (therapeutic) double-bind is immediate and immanent in the body. From here, I would like to prioritize my analysis to the body as the very site in which the structural and systemic problems of psychiatric therapeutics can be begin to be examined. I borrow from Harry Stack Sullivan's concept of "*syntaxic* experience" to model the immanent and material importance of any attempt at constructing a theory of interrelational communication in a psychiatric context. Differing from the *prototaxic* (referring to communicational modes before the usage of symbols) and *parataxic* (referring to forms of experience that occur at the first order of private thought and feeling, mostly nonverbal and socially isolated communication) modes of experience, Sullivan defines syntaxic experience as defined by the interpersonality and interaffectivity of communication.[98] This presupposes that syntaxic experience must occur from one person to another engaged in a larger system of communicative and experiential contexts than one's own frame of psychological or linguistic reference. Sullivan writes: "Consensually validated symbols underlie almost all operations in the syntax mode; what distinguishes syntax operations from everything else that goes on in the mind is that they can under appropriate circumstances work quite precisely with other people."[99] Sullivan's interpersonal theory of psychiatry posits that a "consensually validated meaning of language" operates to elaborate the temporal-durational interpenetrability of knowledge in any instance of communicational exchange.[100] In other words, written on the body is the anticipations of the past, the expectations of the future, forged together in order to construct some basis of 'reality' to understand the present. In Eugene Gendlin's words: "Let us think from and speak from how we experience the present with the body, and how the past is in the present and in the body, indeed how *the body is a kind of past*, a past that is now involved in experiencing the present."[101]

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[98] Harry Stack Sullivan, *The Interpersonal Theory of Psychiatry* (New York and London: W. W. Norton Company, 1953), xiv.

[99] Ibid., 224.

[100] Ibid., 28-29.

[101] Eugene T. Gendlin, *A Process Model* (Evanston, Illinois: Northwestern University Press, 2018), 35. My emphasis.

The necessary existence of residues at the level of the body points to an understanding of phenomenological time as bodily residue, the abject object of residual memory, and perhaps trauma. That which is residual, surplus, lingering become abject through the myth of power to identify and prescribe. Yet by the very nature of their existence, one may continue to recognize residue in imminent relation to the self and the body. A theory of the syntaxic *body,* then, emerges from the fundamental acceptance of the role of the body in the generation of any kind of meaning, which *remains* in some form relating back to the body and its material contexts. Eugene Gendlin's theoretical contribution to psychotherapy posits "full-bodied process" as a pattern of implicit resonance forging beneath the perceptible level of syntaxic communication. Gendlin's process model begins with and returns to the primacy of the body in its symbolic functions and internal (in)coherences: "The process is not only an occurring but also always an implying… We want to understand the living body's own indicating, own implying, own way of being now or here and also being something that is *not* occurring now and/or here."[102] Because the body is always already in dialectical engagement with the situational environment it finds itself in, and because we can, and indeed perhaps must, go so far to say that the situational environment *is* the body's process, a notion of bodily knowing becomes the central phenomenon that dialectical patterns of psychotherapy must strive towards understanding.

The structural problem, however, remains to be confronted. The possibility of its confrontation is made exceedingly difficult by its volatile, and perhaps even invisible pervasiveness. In "Psychiatric Power," the lectures given at the College de France from 1973 to 1974, Michel Foucault posits that what is essential and inextricable to the dynamics of power is that "ultimately, its point of application is always the body. All power is physical, and there is a direct connection between the body and political power."[103] Yet, the violence of power, that is, the 'material' epiphenomena of such

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[102]Ibid., 29.

[103]Michel Foucault, *Psychiatric Power*, ed. Jacques Lagrange, trans. Graham Burchell (New York: Picador, 2006), 14.

power's exertions, may not always manifest as physical mutilation, a gory scene of blood and guts and limbs. The very computation of the violence of power being one of fleshy, bodily harm actually maintains the deleterious notion of flesh separated from mind, of the body somehow distinct from the mental processes that translate its experiences of pain and suffering. If we consider mind in its form and substance, the deployment of punishment has never quite relocated away from the body, nor has it ever lost its materiality. The violence inflicted may be "bodiless" in the sense that there is no longer a public spectacle to behold, but it is no less fleshy and actual.[104] Bateson writes: "However well-intentioned the urge to cure, the very idea of 'curing' must always propose the idea of power," and any idea of power must be located and seen within the prevailing materialist epistemology that the field of psychiatry operates within and through.[105] Foucault also instigates an awareness of when he makes an appeal to the *material* epiphenomena of epistemological presuppositions in the ongoing construction of discourse production. He writes: "A corpus of knowledge, techniques, 'scientific' discourses is formed and becomes entangled with the practice of power to punish."[106] The "condemned man," by Foucault's definition, is *the man who is no longer seen*: victim of the shifting punitive schema from the body to the "soul" as the locus of punishment, the condemned man is no longer bruised and bloody on the surface of his body but executed from the inside out. The traces of his stigmatization no longer have a visual index with which to grasp them, and any attempt to verbalize this process of stigmatization cannot escape a confined, hallucinatory parataxic level. Foucault posits this "an execution that affects life rather than the body," for there is no method more effectively disembodying,

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[104]Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1995), 23.

[105] Gregory Bateson, "A Formal Approach to Explicit, Implicit, and Embodied Ideas and to Their Forms of Interaction," *A Sacred Unity: Further Steps to an Ecology of Mind,* ed. Rodney E. Donaldson (San Francisco: Harper Collins Publishers, 1991), 186.

[106]Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1995), 23.

disenfranchising, and abstracting that denying the duration of one's pain from their own perceptibility, in order to suggest that the cure to this pain is an achievable 'thing'.[107]

The body of the condemned is characterized by a *denial of its own bodily reality* from the outside, consistently hyperaware of being seen as an object of another's presuppositions. The condemned thrashes inside his own untouched body without the *verifiable*, physical intervention of the stigmatizer. Because there is no *residue* to this violence of disciplinary power, the stigmatizer's actions remain illegible for reprehension. In Foucault's words, "The apparatus of punitive justice must now bite into this *bodiless reality*."[108] What hemorrhages from the punished body is no longer blood and infection, but immaterial *beliefs* about infarctions *in* the self, the septicity of internalized surveillance and judgement. This is the ideal form of psychiatric stigmatization as a mechanism of power. It revels silently and 'invisibly' in its own teleological completion, beneath the level of conscious presuppositional premises in *both* the stigmatizer and the stigmatized. The institutions of psychiatry, then, exist as the totalizing "agent of intensification" of the reality that the body is actively denied perception of, and psychiatric power refers to nothing but the "surplus power of reality" that is exerted and prescribed.[109] Inscribed, coded, and structured on the asylum apparatus is the premise that reality becomes reality only in the process of being prescribed from a context of insurmountable hierarchy of authority and position. "The asylum *is* reality in its taken power, it *is* reality medically intensified, it *is* medical action, medical power as knowledge, which has no other function that to be the agent of reality itself."[110]

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[107] Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1995), 13.

[108] Ibid., 17. My emphasis.

[109] Michel Foucault, *Psychiatric Power*, ed. Jacques Lagrange, trans. Graham Burchell (New York: Picador, 2006), 146.

[110] Ibid., 166. My emphasis.

In the power that emerges from the eluding and secretive nature of the nonresidual and the invisible, Foucault locates a concurrent emergence of the stigmatizer's impulse to construct a tyranny of surveillance for a fantasy of 'health' or 'safety'. Foucault's panoptic mechanism, then, can be understood as a heightened peak-state of an *in*sane society. The Benthamian panopticon portrays a political utopia of ultimate self-surveillence that propagates disciplinary power by way of individuation. The individual is seen as hermetically sealed and isolated so as to be a clean-cut target to assign culpability; the act of declaring individuality is a commitment to an eternal reproduction of the same object of visibility, and therefore of control. "Inspection functions ceaselessly. The gaze is everywhere."[111] The individual under the panoptic gaze describes in particular the phenomenological reality of the stigmatized and medicalized individual caught in an infernal double-bind of self and (in)visibility. The fact of one's own visibility constructs conservatories of unchecked paranoia, where whether the 'prisoner' is actually observed by an external inspector no longer holds significance for it is the *knowledge* that one is being surveilled that monitors and facilitates one's own surveillance. Just as long as the subject thinks and breathes 'for himself,' adheres with desperation and resistance to the remains of a love for the self, the paranoia of being seen without seeing back is reinforced into the very structure of the territory he occupies.

The impact that Harry Stack Sullivan had on the field of theoretical psychiatry and psychoanalysis (including the likes of Frieda Fromm-Reichmann, Erich Fromm, Clara Thompson, among others) was his ability to think transcontextually about such structures of the territory, the relatedness between psychiatry and other social sciences. Performing a 'field-theory' approach to his work in clinical settings allowed him to also posit the psychiatrist as a "participant observer," one who sifts through defined norms, accounting for the forces and arcs of influence that creates such categories of the abnormal and anomalous. The method of participating observation relegates data obtained by methods *other than* what is emergent from the interactions of the person-to-person psychiatric

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[111] Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage Books, 1995), 195.

interview to, at most, a secondary, peripheral importance. The interdisciplinary resonances of Sullivan's psychotherapeutics can be gleaned from his concept of "a psychiatry of peoples," outlined in the last section of his latest work, the 1953 posthumous publication *The Interpersonal Theory of Psychiatry*. Sullivan posits the bodily experience of anxiety as the necessary disruption of security operations, the accepted habits of the self-system reproduced in order for the self-system to maintain its current way of doing things. Anxiety, simply defined, is the words used to describe the moment when "one has become aware that one is uncomfortable," and it is the "telltale [sign] that shows increased activity of the self-system in the interpersonal field of the moment concerned."[112] A "psychiatry of peoples" depend upon bearing through the anxieties of interpersonality, of attuning to the patterns (and patterns of patterns) of intersubjective behaviour, for these patterns are the only way we have access to information about developments (and pathologies) in individual personality. Sullivan's theory of psychiatry and interpersonal relations emerge from the central presupposition that the therapist should "help patients to help themselves" through cultivating a mutual and consensual knowledge of the patient's patterns of relationality and life events, and if the therapist has any kind of professional goal in mind, it is to become "better and better informed about the factors which govern the possibilities of interpersonal action."[113]

Another instance of psychiatric fieldwork with an interactional tenor is Erving Goffman's year of field research at St. Elizabeths Hospital in Washington, DC, where he went "undercover" to write his seminal work *Asylums* in 1961.[114] Goffman analyzes the psychiatric hospital institution via a sociological lens, describing the mental hospital as a "total institution" akin to a prison or concentration camp or monastery, where disciplinary measures and regimentation dominated every aspect of the patients' daily life. At the crux of such domination was the systemic denial of these patients' means of self-efficency and

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[112] Harry Stack Sullivan, *The Interpersonal Theory of Psychiatry* (New York and London: W. W. Norton Company, 1953), 378.

[113] Ibid., 381.

[114]Erving Goffman, *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (Anchor; Reprint edition, 1961).

expression at a level of their speech and communication. To use words to convey one's experience, decisions, actions, reception of a message, understanding of a suggestion or command, and so on, is to sustain some certainty that he is capable of being self-determining. The importance of "rhetoricality" in self-determination points to the ability of verbalizations, an exchange of words, before the level of physical altercation—the ability to protect his physical body in situations of threat or command. Goffman writes, however, that "the inmate in a total institution can find himself denied even this kind of protective distance and self-action," for when placed in a context of a totalizing carceral space, "the statements he makes may be discounted as mere symptom… The inmate may find that a *dual language* exists, with the disciplinary facts of his life given a translated ideal phrasing by the staff that mocks the normal use of language."[115] Far from instantiating a context of recovery, Goffman maintains that the asylum actively produced the structural conditions in which the sorts of disordered behaviour (characterized as abnormal and for which the patients were ostensibly admitted) were being created. This double-binding structural restraint of the psychiatric hospital is exacerbated and maintained by the institution, becoming a closed system from the rest of society and indeed actively creating instability in one's perception of the outside world—of 'reality.' Goffman locates methods of institutional routine and isolation as instigating bodily processes of a mortification of the self, from myriad forms of physical and social abuse to the violence of stigmatization. The "'mentally ill' . . . suffer not from mental illness, but from contingencies, for "the behaviour of patients in psychiatric wards is best understood as symptomatic and reactionary of a context of "situational improprieties."[116]

It is an easy task for posterity to position both Sullivan and Goffman's accounts of institutionalization as utterly involved with structures of desire and power from the get-go, performing a scholarly neutrality that exposes their privileged positionalities at work to maintain a guise of impartiality and openness to the object of inquiry at hand. Both

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[115] Erving Goffman, *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (Anchor; Reprint edition, 1961), 45.

[116] Ibid., 135.

analyses indeed depend on a standard of disentanglement and disinterestedness to maintain the precision and effectiveness, and therefore validity, of their acts of scrutiny. The intimacy of scrutiny can allow for an effective investigation of the intersubjective matter, and yet some intimacies are unwanted and contrived for the implicated other, and therefore always necessarily partial. Although both projects aim to draw attention to epistemological and structural rigidities in the clinical environment as a whole, the phenomenological limitations of both projects must be included in their investigation. In Goffman's words, "To describe the patient's situation faithfully is necessarily to present a partisan view," a description that begins from an awareness of the descriptor's inevitable tendency to be unfaithful.[117]

From this point of "doubled mutability," I would like to posit the potential fruitfulness of accounting for narratives within the psychiatric setting as a process in which thought itself is encountered as largely *implicit* and *implicated in* a gesturing towards an integrated sense of complexity. The order of thought, and any potential for meaning emergent in that thought, comes from the implying and participating function of that which is presently occurring. This brings us to conceive of psychotherapeutics embodying or miming a model of relevant emergence that the existence of metaphor depends upon: "… communication in the psychiatric interview [as well as in written form of the scholarly texts] is by no means solely a matter of exchanging verbal contexts, but is rather the development of an exquisitely complex pattern of field processes which *imply* important conclusions about the people concerned."[118] The implicit function of the Foucauldian, interpersonal and processual model of therapy is that it cannot rely on an arbitrary metric of relatedness that defines itself in terms of a preexisting similarity, for this would cause participants to inevitably subscribe to some kind of hegemonic standard of normativity. In the model of relevant emergence, then, it is the very process of the 'metaphor'— the intricate logic of non-logic, the order of thought beneath explicit

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[117]Ibid., x.

[118] Henry Stack Sullivan, *The Interpersonal Theory of Psychiatry* (New York and London: W. W. Norton Company, 1953), 381.

occurrences and concepts— that 'creates' the relevance and similarity that provides a means of explication. Perhaps this is what Bateson meant when he designated metaphor as "not just pretty poetry, neither good or bad logic, but the logic upon which the biological world had been built"[119]: evolutionary organization depends not upon the separation and classification of subjects, but the arrangement of shared predicates in the organisms' embryological process. In other words, it is only in the process of language that 'subjects' exist (and therefore the separation of subjects from predicates), and the biological world in its evolutionary process never *needed* language. Or, perhaps, there *is* language in nature, but a language that human logic cannot wield because it is only ever determined by context.[120] The structure of thought immersed in a process of equating *predicates* without a classification of hierarchy of subjects allows access into a corpus of knowledge which can be designated as implicit and emergent. That which is known is only ever knowable through elaborate differences of patterns, and the nature of relationships can begin to be understood in this 'realm' of knowing and organization that Bateson designated as 'metaphorical.'

Foucault defines *the residual* as "that which is irreducible to the system"; because every system has its margins, and with margins comes the necessary existences of parts which its patterns of search are unable to account for, "the system will inevitably confront the unclassifiable, the unsupervisable, the indistributable."[121] He designates the "mentally ill" as a new residual class, the anomic remains persisting in their unanswerability: "As for the mentally ill, they are no doubt the residue of residues, the residue of all the disciplines, those who are unassimilable to all of a society's educational, military, and

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[119] Gregory Bateson, "Men Are Grass: Metaphor and the World of Mental Process," *A Sacred Unity: Further Steps to an Ecology of Mind,* ed. Rodney E. Donaldson (San Francisco: Harper Collins Publishers, 1991), 241.

[120] Mary Catherine Bateson, *Our Own Metaphor: A Personal Account of a Conference on the Affections of Conscious Purpose on Human Adaptation* (Washington and London: Smithsonian Institution Press, 1972), 67. If this process undergoes an inversion, that is, "if we accept that we cannot handle natural languages because they're context-determined, but if we can *handle the context* properly as operator in our logic," we have begun to encounter a tangible possibility for and definition of systemic, epistemological change.

[121]Michel Foucault, *Psychiatric Power*, ed. Jacques Lagrange, trans. Graham Burchell (New York: Picador, 2006), 52.

police disciplines."[122] If disciplinary power actively ensures that this residual class is anomized, that is, defined by their very lack of normative standards, it is ultimately discarded from serious consideration. Yet it is this very anomic quality from which the irreducible, the systemic and cybernetic, the nonschismogenic class may potentially emerge. Anomies of the norm presuppose the complexity of internal interrelations and interruptions as actively participating in a sort of structural-semantic isotopy, a constant reiteration and renewal of experience moving towards unexpected insights and coherences via intersubjective interpretation. In other words, because "one may be or may become mentally stable to the extent of one's awareness of, our ability to become aware of, interpersonal experiences," it is towards this 'goal' of interpretive, mutual clarity that the psychotherapist must facilitate the clinical interaction.[123] The (nonlineal, nonlogical, implicit and implicated) communication shared between the patient and the therapist is aimed to arrive at a level of constructive and curative insight into patterns of the patient's interpersonal personal experiences. This communication must then be framed and presupposed by an awareness of the patient's anomic existence in larger, insensitive and mechanistic, if not actively hostile normative contexts. This is not to construct identitarian pigeonholes or assign blame and shame, but to increase a sense of importance of the self-system's physical, phenomenological experience amidst the noise of normativity.

The problem of prescribing 'responsibility' is irrefutably entangled with the problem of agency in any discussion of the double-bind: how is the individual to be held responsible for that which refuses his involvement in the matter, for the processual outcomes and dynamics of the situation which he cannot mediate? I believe this is intricately entangled with the question I began this section with: Where does the music, the patterned sequences of relationality, lie? How does one make "poetry out of being invisible," to

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[122] Ibid., 54.

[123] Frieda Fromm-Reichmann, *Principles of Intensive Psychotherapy* (Chicago and London: University of Chicago Press, 1960), 80.

borrow Ralph Ellison's words?[124] An attempt to truly feel the vibrations of this knot of questions would entail some sort of engagement in as paradoxical a process as the initial double bind. It is precisely at the moment of double-binding experience that disrupts and shakes our 'safe illusions' about the self and other that we come closer to an awareness of the deep premises that form our perceptual processes. And perhaps herein lies the music, the perceptual sensitivity (which is always epistemological) that therefore allows us to be ready to accept insights about the self and the world as they emerge. In the context of an epistemology and therefore a construction of power which gives into a pathologization of certain bodies and phenomenologies, the experience of being seen and *not* being seen becomes an extended experience of participating in the paranoia that is a privilege not to perceive. Mary Gaitskill conveys the moment of experiencing one's own body as a personal piece of reprieve, a source of sustenance emergent by way of its inherent musicality:

> I drank and bit the rim of my plastic cup and lost myself in the music on the sound system. I had succeeded. I had become like this music. My face had been a note in a piece of continuous music that rolled over people while they talked and drank and married and made babies. No one remembers a particular note. No one remembers a piece of grass. But it does its part. I had done my part."[125]

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[124] Ralph Ellison, *Invisible Man* (Vintage; 2nd ed. edition, 1995), 8.
"Perhaps I like Louis Armstrong because he's made poetry out of being invisible. I think it must be because he's unaware that he is invisible. And my own grasp of invisibility aids me to understand his music.... Invisibility, let me explain, gives one a slightly different sense of time, you're never quite on the beat. Sometimes you're ahead and sometimes behind. Instead of the swift and imperceptible flowing of time, you are aware of its nodes, those points where time stands still or from which it leaps ahead. And you slip into the breaks and look around."

[125] Mary Gaitskill, *Veronica* (New York: Vintage Contemporaries, 2005), 235.

« iii. Transcontexuality »

There ought to be some kind of contrapuntal relationship between the singing the nitrogen cycle, the cargo cults, and the stuff going on in somebody's head.

Mary Catherine Bateson[126]

The first two sections brought attention to the immediate relation of the body in attempts to map out the morphology and etiology of double-binds, both pathological and therapeutic. Any attempt to arrive at situational clarity in a knot of double-binding premises, regardless of scale and content, entails a process of navigating the complexities with which communication bends and spirals into varied articulations of the relationality incessantly present. Such a presupposition induces the scientist or general inquirer to begin their investigations cognizant of the potential emergence of lateral, *transcontextual* affects in their particular scope of pursuance. As Bateson demonstrated, the rather strange and eccentric contribution of double-bind theory to the field of psychiatry is its movement away from the discipline itself, thereby performing an interruption and epistemological enlargement to its 'disciplinary' power. Bateson's double-bind theory depends upon the treatment of its psychiatric case studies of schizophrenic psychopathology as neither more important nor more scientifically valid or serious than other formalizations of creativity emergent from such meta-level "tangles of epistemological contradiction." In Bateson's words:

> Humor, art, poetry, religion, hyponosis, and so on are equally rich, equally informative, and equally alien to the epistemology of both logic and direct causality. He who would discover for himself what ideas are made of and how ideas combine to make a mind must wander in one or more of these transcontextual mazes.[127]

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[126] Mary Catherine Bateson, *Our Own Metaphor: A Personal Account of a Conference on the Affections of Conscious Purpose on Human Adaptation* (Washington and London: Smithsonian Institution Press, 1972), 301.

[127]Gregory Bateson, "A Formal Approach to Explicit, Implicit, and Embodied Ideas and to Their Forms of Interaction," *A Sacred Unity: Further Steps to an Ecology of Mind,* ed. Rodney E. Donaldson (San Francisco: Harper Collins Publishers, 1991), 189.

The non-linear and contingent eco-mental system that we consider the human mind is entangled with wider eco-mental systems that condition the environments in which our minds are allowed to exist and flourish. When Bateson famously phrased the statement "Difference is what makes a difference," he was appealing to a notion of intrinsic relationality or nonsovereignty among parts of a living system. Difference is an appeal to the sensitivities and irritabilities of entities encountering other entities, for the transmission and reception of information is inevitably a phenomenological and somatic experience. The descriptors of natural ecology rely on the vocabulary of 'states' and 'conditions' to articulate the characterological process of identity, the identifiable, ontological traits of a living entity. Yet Bateson asserts that life can only exist in terms of difference: "The step from mind to body is the step from state to difference… As long as you have difference, that is, the possibility of moving your states, by rubbing them on differences, then you have 'mind.'"[128] What Bateson designates as a world of difference is precisely the perception of the 'eco-mental' layers of systemic life, as well as the matter of *articulating* such perception, a process which is necessarily transcontextual.

In "Birth of a Matrix," Bateson relates a story of one of the dolphins in his care at the Oceanic Institute to explicate the provenance of transcontextuality as a 'fundamental' characteristic of epistemological transparency in scientific investigation. With this particular dolphin, he learned that exerting discipline and punishment regarding her (in)ability to follow the (arbitrary) rules with which she must engage with her trainer and other dolphins—in short, entrapping her in a double-bind—caused severe discomfort and maladjustment in her behavioural patterns. He came to the insight that if the pathology can be resisted, that is, if there could be some kind of a communicational alternative to blame and punishment, the total experience of participating in relational tangles would promote *creativity* instead of experiences of pathological pain. Bateson documented again and again in his observational notes some variation of this statement: "We had to tell the

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[128]Gregory Bateson and Robert W. Rieber, "Mind and Body: A Dialogue," in *Body and Mind: Past, Present and Future*, ed. Robert W. Rieber (Cambridge, MA: Academic Press, 1980), 248.

animal that in spite of her failure to solve the problem, she was still 'loved.'"[129] Or, as Donna Haraway writes, the scientist must have learned to signify in his own work "a nasty developmental infection called love."[130]

The difference that made a difference in this encounter was the scientist's active search for a method—no matter how similarly arbitrary as the initial, painful double-bind—with which to explicitly comment upon the relationship between the dolphin and the trainer *as an integrated part of* the behavioural study of the dolphin. Telling the animal that 'she was still loved' is akin to the therapist setting a context of immovable validation as a necessary precursor to any sort of scientifically 'feasible,' therapeutic practice. The premise of *metacommunicational entanglement* explored in the pathologies of schizophrenic states remain unchanged: the double-bind, as well as the general structure of the double-bind that can formally be called paradox, can only exist in the cybernetic domain of hierarchal levels, of oscillatory, undulating contradictions between statement and meta-statement, message and context.

Bateson's notion of 'self-validating metaphors,' then, resides at the crux of the therapeutic double-bind, which actively acknowledge that the propositions exchanged between a therapeutic relationship that 'make a difference' operate at a level of transcontextual, metaphoric resonance, at *a higher level of abstraction* that is not quite 'described' and 'experienced' as matters of teleological goals and conscious purpose.[131] This level of abstraction and learning is a meta-level, a level of learning to learn and "learning the context… creating the metaphors by which you are going to be living."[132] These metaphors can be described as self-validating *because* of their transcontextuality; I

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[129] Gregory Bateson, "The Birth of a Matrix, or Double Bind and Epistemology," *A Sacred Unity: Further Steps to an Ecology of Mind,* ed. Rodney E. Donaldson (San Francisco: Harper Collins Publishers, 1991), 209.

[130] Donna Haraway, "The Companion Species Manifesto" in *Manifestly Haraway* (Minneapolis: University of Minnesota Press, 2016), 95.

[131] Symtomatic and therapeutic paradox and their self-validating metaphors must be conducive to epistemological change, as in the original sense of the Greek verb *epistamai* meaning to put oneself "over" or "higher" in order to better observe the phenomenon at hand.

[132] David Berenson Interview with Gregory Bateson, March 1980, 20.

will behave and become like the contexts I occupy, for context does not govern *what* I am going to learn, but *the way* in which I am going to learn in the future. Were I to follow Bateson's steps and 'classify' statements regarding the nature of self entangled with another as contextual, I would define the psychotherapeutic relationship as one conducive to the examination and reorganization of self-validating contexts the person in question occupies. The matter here only increases in complexity: "What happens to my self-validating contexts when it's going to be interacting with yours?"[133]

During the 1968 conference at Burg Wartenstein on "The Effects of Conscious Purpose on Human Adaptation," documented by Mary Catherine Bateson in *Our Own Metaphor*, Bateson (perhaps deliberately) gave formal description to his lifelong transcontextual search as searching for "a formal description of the ways in which human planning and applied science tend to generate pathology in the society or in the ecosystem or in the individual."[134] The double-bind theory is one instance of such formal description, one meta-application or meta-articulation of the scientific questions he wished to ask about the nature of *explanation.* Mind must be immanent in any instance of explaining systems, as well as the complexity necessarily present in the generation of such systems. If material systems that engage in self-corrective, recursive behaviour and exhibit processes of relationality and mutual entanglement are said to 'have' a mind—in short, *if mind is immanent in nature*—the nature of explanation of the mind-body problem undergoes a radical re-articulation. Such a task may necessarily demonstrate an ample dependency on the representative metaphors used to describe or evoke focalized relations, including the relationship between the individual and the overlapping whole, the relationship between creativity and schizophrenia, the relationship between the past, present, and future, work and play, and of the 'mind' and 'body—if and where such terms exist.

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[133] Ibid., 21.

[134] Mary Catherine Bateson, *Our Own Metaphor: A Personal Account of a Conference on the Affections of Conscious Purpose on Human Adaptation* (Washington and London: Smithsonian Institution Press, 1972), 31.

The task of reorganizing the epistemological boundary of mind and nature may necessarily begin with the repetition of a familiar story. The postulations of science from the 17th to the 19th century allowed causation and determination to be perfectly explained with linear clarity and mechanistic precision. Newton revolutionized the practice of natural description as quantitatively sane, wholly translatable to the language of mathematics, and compounded with a widespread commitment to Baconian principles of observation and induction as the approach to causality, the 'new' scientific model of inquiry was based on empirical evidence present to the human senses or that could be made present with technological applications. Furthermore, Darwin succeeded in demonstrating the evolutionary problem as reducible to natural 'law.'[135] If the agency of evolution was posited as transcendent rather than immanent, it becomes of utmost importance to demonstrate that the unknown, unmastered territory—the life of the individual organism—could not be comprised of anything that would affect and influence the evolutionary territory. Bateson postulates, however, that at the same time these objective scientists had to believe in a continuity in nature, so that ultimately the *whole* of natural phenomena would prove describable by the parts they have examined, and susceptible to their analysis. Another law, Charles Lyell's geological uniformitarianism, catalyzed this sense of certainty with which to assert that the same processes operating today must have operated in the past.[136] It was therefore a matter of necessity, therefore, to set up a *particular* split between the biology of the individual and the theory of evolution.[137] When Descartes created the Cartesian graph, he further instantiated a *general* split of coordinates across the entire field of scientific thought. He succeeded in

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[135] The relationship between Social Darwinism and 19th century imperialism and liberal capitalism cannot go without some mentioning: "At the present day civilized nations are everywhere supplanting barbarous nations; and they succeed mainly though not exclusively, through their arts, which are the products of the intellect. It is, therefore, highly probably that with mankind the intellectual faculties have been gradually perfected through natural selection. […] With savages, the weak in body or mind are soon eliminated; and those that survive commonly exhibit a vicious state of health. We civilized men, on the other hand, do our utmost to check the process of elimination; we build asylums for the imbecile, the maimed, and the sick; we institute poor-laws… […] At some future period, not very distant as measured by centuries, the civilized races of man will almost certainly exterminate, and replace, the savage races throughout the world." Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, vol. 1 (London: John Murray, Albemarle Street, 1871), 160; 177.

[136] Charles Lyell, P*rinciples of Geology* (Penguin Classics, 1998).

[137] Gregory Bateson, "Form, Substance, and Difference," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 457.

determining that ‘variables’ are to be handled separately for the sake of the scientist’s unambiguous method. Namely the variables were matter and mind, matter as a horizontal coordinate and its opposite, mind, contrasted as the vertical. In other words, phenomena that are not present through empirical observation (feelings, perspectives, positionalities, values, judgements, fantasies, desires) were relegated to a transcendent spirit or soul describable mainly through spiritual or ecclesiastical explanation—and thus not considered relevant to “science.”

Bateson determined the mind-body problem, and its atomistic and flat epistemological approach owing a great deal to Newtonianism, Cartesianism, and the bioenergenetics of nineteenth-century field theory, was the greatest obstacle to cybernetic method and recursive epistemology. The problem can be stated as such: the split of matter from mind, mind from body induces a detrimentally false, ‘insane’ understanding of how the natural world, and the human’s relation to it, operates. His lifelong career, and the resonances his work has for his posterity may be conceived as a profound attack on this separation of coordinates, of mind and matter, of psychology and the soma, of ecology and human complicity. He was fond of facetiously reminding his audience that the map is never the territory; there are no actual finches in Darwin’s theory of selection, Bacon’s empirical observations cannot read minds, there are no kidneys or gall bladders in the corpus of genotypic material, and so on. The events and objects about which the message material communicates are not themselves present. This means that—contra Darwin’s failure to perceive it as such—the question of evolution, is a question of communication, of knowledge construction.

Any attempt to investigate or speak of “mental” phenomena had to include supernaturalism, as ideas and feelings were unintelligible to the senses, too alive and unpredictable to lie still on the Procrustean bed of logic. The mind-body split, the reductionism of mind as tangential to the physical forces and chemical reactions of the ‘material’ world, formed only one half of the paradox. For on the other side, that which was categorized as the somatic, palpable, and embodied was simultaneously denigrated

and tyrannized by the free and rigorous mastery of infinite mind. With the epistemological framework of 20th and 21st century scientific criticism, it seems 'evident' to the contemporary thinker that the mind-matter split was a leveraging tool to construct new forms of power and distribution of order, where that which is relegated to 'matter,' namely embodied and positionally overdetermined subjects such as women, children, the racially, nationally, economically, sexually 'othered,' is expedient to the rational, unrestrained, transcendent mind of man. A linear, mechanistic, dualistic model must construct arbitrary punctuations in order to postulate that an objectively observable and determinable line of causality and reality exists, thus losing the intricacies of positionalities, explanations, and hypotheses that could be emergent. Furthermore, the split envisions the subject as comprised of a dominant mind that not only controls 'the rest'—*i.e.* the body—, but which *owns* the body.[138] What is owned under capitalism is positioned to be sold, and the presupposition of *selling*—in reality—is to alienate it, to render it other.

Bateson posits that once one has (unconsciously) correlated the immanence of the 'self' with the 'body' in order to establish the transcendence, non-corporeality or anti-relationality of the 'mind,' one constructs a mind-body problem. This is indeed a nasty, persistent double-bind in which no satisfactory premises or conclusions can emerge through the epistemology which produced it. Likewise, the Cartesian coordinates and their axioms may be perfectly consistent, but they generate Gödelian paradoxes that may be true but cannot be 'proved' by the axioms that are produced. Oppositions enter into a kind of ontological competition with their other, destroying each other and their shared environment in the process, and so on:

> We begin to see some of the epistemological fallacies of Occidental civilization. In accordance with the general climate of thinking in

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[138] Since the Lockian view of society and the individual, the concept of the *body as property* of the 'self' has been pervasive in our society. Locke writes in the *Second Treatise on Civil Government*, "through the death and all inferior creatures be common to all men, yet every man has a property in his own person; this nobody has any right to but himself." (27, 1690).

> mid-nineteenth century England, Darwin proposed a theory of natural selection and evolution in which the unit of survival was either the family line or the species or subspecies or something of that sort. But today it is quite obvious that this is not the unit of survival in the real biological world. The unit of survival is *organism* plus *environment*. We are learning by bitter experience that the organism which destroys its environment destroys itself.[139]

This error in punctuation propogates an "ecology of *bad* ideas," a dominating system of weeds "branching out like a rooted parasite through the tissues of life and everything goes into a rather peculiar mess."[140] In other words, the larger system is driven insane, and its insanity is incorporated and transmitted to, or inherited by, the system of 'my' thoughts and experience. The "unit of survival" in the biological world straddles an entangled and circuitous 'both-and' that makes difference, and therefore reproduction, possible.

Science in the 20th century can be described in terms of a paradigmatic confrontation, namely with the persistence of Cartesian dualisms as an epistemological hindrance rather than an instrumental apparatus for scientific progress. Science became a venue for experiencing the therapeutic and symptomatic (counter)paradoxes, that is, the entanglements of double-binds, that emerge when central epistemological premises of the discipline constructed around and with the presupposed split of coordinates turn out to be fundamentally erraneous. In Anthony Wilden's words: "Epistemology is a question of where you draw the line, and there are only a restricted number of loci through which to draw it (*i.e.*, everything in this paper has somehow been said before). The line drawn between 'organism' and 'environment' by our conventional model of reality is such a

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[139]Gregory Bateson, "Pathologies of Epistemology," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972),., 491.

[140] Ibid., 492.

line, and, like all such lines it is a fiction. Unfortunately, we think that it is real."[141] At the level of our everyday verbal language, the usage of the verb 'to be' to talk about matters of relationships demonstrates how certain languages condemn its user to the law of identity, the identifications of 'is' that distort and destroy orders of abstraction. Alfred Korzybski, the Polish mathematician, engineer, and founder of general semantics, posited that since Aristotle, the elementalistic premises underlying human relations within the logic implied in subject-predicate languages have not changed at all, no matter how technically advanced the culture was.[142] This was the central premise from which general semantics began: in the structure of these languages, methods, 'habits of thought,' orientations, etc., delusional, even psychopathological factors are preserved and transmitted into objects and actions. Korzybski proclaimed that: "The Aristotelian structure of language is in the main elementalistic: it implies through structure a split or separation of what in actuality cannot be separated. For instance, we can verbally split 'body' and 'mind,' 'emotion' and 'intellect,' 'space' and 'time,' etc., which as a matter of fact cannot be separated empirically and can be split only verbally."[143] To borrow from Lacanian vocabulary, the material differences of the symbiotic and Symbolic whole are systemically reified into Imaginary, unmediated oppositions. "Whatever you say a thing is, it is not," "Words are not the unspeakable objective level containing the actual objects outside of our skin and the personal feelings inside our skin," "The map is not the territory"[144]: these are some of the Korzybskian axioms that Bateson began studying the structure of patterns as a complex set of relations, steps towards a topology of complexity and recursivity. In the processual, recursive model, one cannot inquire about the 'meaning' of a word without seeing the arcs of dependency upon the 'meaning' of other

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[141]Anthony Wilden, *System and Structure: Essays in Communication and Exchange* (London: Tavistock Publications, 1972), 219.

[142]Alfred Korzybski, *Selections from Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics, 2nd ed.* (LA Bergne, TN: Lightning Source Inc., 2010).

[143] Ibid., 12.

[144] By maps, Korzybski meant anything and everything that humans formulate with symbols, 'things' that are only maps of what they purport to represent. All branches of science, all religions, all theories, all books, including this body of writing. No map represents all of 'its' presumed territory, meaning maps are self-reflexive: every map is at least a map of the map-maker: her/his assumptions, skills, worldview, life-experience, etc.

words used in defining it. A non-exploitative and recursive epistemology remains aware of its own epistemological acts and epiphenomenal modifications, a notion of fantasy and knowing that William Blake had two centuries prior: “Can a Poet doubt the Visions of Jehovah? Nature has no Outline; / But Imagination has. Nature has no Time; but Imagination has. / Nature has no Supernatural, and dissolves; / Imagination is Eternity.”[145]

It seems that the immediate fact of monologue and lecture in the academic context, the belief that I can sit here in my desk using my unilateral mind to think things and purposively get somewhere with it is derivative from the premise that the mind controls the body. When a psychotherapist lapses into unilateral therapy, falling into the same old patterns of prescriptive, self-satisfied hypocrisy, she is obeying the same premise and thereby trapping herself and the patient in a mistaken epistemology that produces the false belief that either one of them can dominate the system and have power over it. Bateson writes: “A paradox is a contradiction in which you take sides—both sides. Each half of the paradox proposes the other.”[146] Both academia and psychotherapy are contexts in which one must learn how to navigate paradoxical situations in order to participate in the context at all. Do not solve the paradox: the choice not to choose, to not act, is indeed a form of actively participating in the maintenance or cultivation of the paradox or counterparadox’s fruitful strife and variance. Confronting both sides of the paradox as the tension is still immanent and living entails a sort of initiation or passage into unfamiliar, perhaps even phantasmagorical territory that may attempt to synthesize the coordinates, to ‘see both sides’ as part of one resonating system. And perhaps the fantasy we may

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[145] William Blake, “The Ghost of Abel,” Prose writings (London: MacMillan and Co., 1880).

[146] Gregory Bateson and Stewart Brand, “Both Sides of the Necessary Paradox,” *II Cybernetic Frontiers* (Random House, 1st. ed., 1974), 31. “A paradoxical situation can be described, perhaps as uncomplicated a possible, as existing between love and hate, in which both love and hate are going to be present. To choose to either love or hate presupposes the exclusion of the other, and to do this willingly, to exclude one hand of the Hegelian dialectic—as opposed to clinging to the dialectic and going on to the next synthesis whatever it may be.”

foster as a site for attraction and play, and can help you “come out knowing something you didn’t know before, something about the nature of where you are in the universe.”[147]

[147]Ibid.

3. Searching for Resonance Amidst the Noise

« *Metalogue: All this noise* »

Daughter: I can't distinguish anything from the noise.

Father: Well, how do we distinguish anything from any other form of variety?

D: We identify, make categories, and insert away. We experience one sliver of the variety and race to claim the dominance of our knowledge. We also form metaphysical attachments to some isolated entities, and even try to put them into some identifiable relation, and call it love or hate.

F: You're in quite a mood… In the classical materialist sense, this 'noise' you speak of points to the fact of epistemologically separating random information from 'meaningful' matter-energy. Noise in this sense poses a question of the function and purposiveness of a communicational system, as well as their causal effects and end products. Yet to imagine otherwise, *as a materialist,* from this way of conceiving the world we live in, at ecological, social, interpersonal and aesthetic dimensions, seems to be what is muddling with your head.

D: "I don't think I can find a way to make it on this Earth…!"

F: Again, with your rowdy music…

D: What is crucial to me, both introduced from and emergent through the work of Bateson and 'my' rowdy music, is the notion that resonating systems at all overlapping scales must be defined as *systems marked by a responsivity to noise*. Perhaps its ability to *remember* noise, to glean structure at the very edge of chaos that tempts to dissolve it—

whether forcefully in violence or willingly in ecstasy, or somewhere in between—is embedded in its very process.

"To hide one can forget, or pretend to forget another happening, or distort. They are all just good methods of bettering away from the truth that might be bitter."[148] The bitter truth of the logic of resonance emerges simultaneously with its sweeter one: that any attempt at hearing the sound of potential health requires a troubling, perhaps even scathing look into the presuppositional groundwork on which one has planted one's feet.

F: You are missing the second part of that insight, where the doctor is "cleverly reminded" by her patient of what she has left out: "Another camouflage is to blame it all on someone else. It keeps you from have to face what they really did to you, and what you did yourself and are still doing."[149] Noise does not necessarily remain as noise, perhaps *necessarily cannot* remain as noise if one is not to reproduce a communicative pattern of militant recrimination or self-validation.

D: Noise is a necessary product of the tension between levels of *scale*, the recursive circles of deferred difference between various subsystems outside us and the logical types within our own communication. Or to put it another way, noise does not remain as noise, but a necessary existence for any sort of interpretation, at observing pattern alive in myriad forms both within and without the boundaries of the skin.

F: When I was in school, a long, long time ago, to say that noise exists as relations between the participants would have sedimented some thick layers of confusion in the labs and classrooms. Although, what this brings to my mind is that we cannot believe of ecosystems and a litter of puppies and our own bodies as a perfect Newtonian concord of entities and forces. We may call this a groundbreaking loss of innocence: the system cannot recognize itself (its relationships) as the source of the noise which disturbs and

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[148]Frieda-Fromm Reichmann, *Principles of Intensive Psychotherapy* (University of Chicago Press, 1960), 94-95.

[149] Ibid.

evolves it. We were just on the cusp of arriving at such developments in our department, but with the immanence of the political uprising and other forms of miscellaneous chaos looming in the background, I had to leave to make a living for you and your brother…

D: We have both grown older, but nothing has *really* changed since then. To put it as simply as I can (mostly for my sake, honestly), all this noise about noise leads me to a central premise I wish to return to, that there is an immanent connection between the various, seemingly unrelated contexts within which you or I communicate with each other and others. And resonance is the word I give to the seeming un-relatedness that still manages to form a vibratory exchange between things in the head of the person who bears witness to and participates in the exchange. And this may be a useful metaphor for an epistemological process that cultivates an attention to context and lattices of relationships beneath the sound of our own words, our distinct intellectual playgrounds and educations. Not all metaphors are resounding, not all connections lustfully deep, but perhaps that is precisely the insight that needs to be gleaned in our culture and ecology heavily impacted by our habit of employing our conscious purpose for immediate gratification. At a level where gestures are immanent in the body and meaning is not made verbally obvious, a new way of doing science and art and policy-making can begin to be conceived—which mimics, not suffocates, the fluidly formed and formatively fluctuating, non-verbal (but not non-communicating) and emergent nature of the natural world.

F: Those are some fine words, but how do you explain this to your uncle or grandma? They are so curious as to what you are devoting your whole youth to, and I am always tongue-tied for you.

D: That is the central problem here, Dad, and a main source of all this noise. The skein of words which we have learned the ‘precise’ meaning of since we were schoolboys and girls turn out to be the one of the greatest lies we’ve ever been told. What my words are to me is not what they mean to you; they never are. I just saw an interview of a troubled

man saying that Hitler's doctrine and life's work 'resonated' with him, or a moneyed representative of Monsanto saying their "Modern Agriculture" is truly 'resonant' of our times… And so on.

I could write pages and pages of what rings true and immanent to me in this moment in time, and to those men or my uncle or even you—all to varying degrees of course—it will be nothing but convoluted jargon in a foreign language. It seems so obvious that if I impose upon or take for granted a language I have acquired via my life experiences in the vocabulary and frame of reference of another, then all conversation comes to an end, and yet…

F: What is deemed most 'obvious' is the least perceptible, let alone enacted upon in a context that is in the most need of its teachings.

D: But you know, we are still here still speaking to one another, entwining the structures of our thoughts, making the effort to find some sort of common ground, some sort of mutual resonance. How do I describe my desires without relinquishing their body-level significance? How do I speak in a way that rings true to me but still connects me to uncle and grandma? To mom and to my committee? To the friends I remember in my childhood and the friends in the cubicles beside me?

F: I don't have any answers for you, but it seems that everything you do with your time here depends upon you finding a way to do a lot of shape-shifting, without, at least to a degree of irrevocable distortion, shifting the shape of what could be gleaned from your messages. But then again, any kind of multiplicity or potentiality for complexity entails some level of what we call 'distortion'…

It's not like you can dance your work to your audience, whoever that may be comprised of, and let them see what they will. You've always been a terrible dancer. On the other hand, however, even gestural movement is comprised of a language of its own, and so your problem remains to be unsolved.

I am neither your advisor nor your therapist, but it seems to me from this particular vantage point that you must not lose sight or hearing of what you love, what moves you, *resonates* with you, and what has brought you here in the first place. This is nothing academically insightful, for I do not have your brains or vocabulary, but as a father concerned for her daughter's relative sanity I wish to give you this verbal reminder.

And the more eloquent words of your 'favourite teacher' that you urged me to read also echoes in my head…

> Out in the desert and horrible places, there is a lot of stuff which is true within its very narrow limits. It's called behavioural modification, it's called behaviourism, it's called Skinner, it's called by other opprobrious terms. And these matters of study that they've worked on, you know, are worth studying. Trouble begins, though, when you find, of the pigeons being put into the Skinner boxes, that first of all there is a rule in the lab that nobody but a particular lady is allowed to handle the pigeons, and secondly the graduate students and Ph.D.s emphatically are not allowed to handle their pigeons; they just write the schedules. And then you find that the pigeons adore the lady who puts them in the boxes, that they swoon with pleasure in her hands. And this part of the story is not in general recorded in the research results. Because love, you see, is not what it is supposed to be all about. It just happens to be one of the things that it is all about. Right. There is, therefore, obviously not only a learning to peck prime numbers on discs or whatever it is, there is also a learning to peck prime numbers in *a context whose shape is related to love*. Stone walls do not a prison make, yes, nor iron bars a cage, but love will find a way somehow.[150]

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[150]Carl Rogers, *Dialogues: Conversations With Martin Buber, Paul Tillich, B.F. Skinner, Gregory Bateson, Michael Polanyi, Rollo May, and Others* (Houghton Mifflin; 1st edition, 1989), 183.

« i. Patterns of search »

I made wine from the lilac tree
Put my heart in its recipe
It makes me see what I want to see
And be what I want to be[151]

A song vibrates in my head. It is a song about want and regenerative feedback, consumed in the schismogenic process of increased polarization. Torn in either extreme direction of illness or euphoria, of one heightening the need for the other, our protagonist is always in need of *more*—and the more he seems to have, the more he seems to feel. He begins by relating his story of being lost outside of his body in the night. He is entranced by a lilac tree, and therefore proceeds to harvest it. The truth remains that the tree has nothing to do with his experience of aesthetic delight, for it is the *idea* of the woman that he imbues the tree with that is the cause of his intoxication. It is the *wine* that he willingly makes and consumes from the tree that affects him so, and he takes strange pleasure in observing that he "cannot see clearly" and "feels unsteady," and eventually ends his story lamenting at the tree for feeling "unready" for the complexities of finding *meaning* in his surroundings or his dreams, for his desire to learn and control, for his love. He is incapable of verbalizing, at least in the framework of the song, that the regenerative cycle of suffering and gratification is, and will never be quite enough. It is his inability to recognize the cybernetic relations immanent in his experience under the lilac tree that distances him from any kind of body-level significance to his wine, and he succumbs to a moment of intoxicated runaway.

The translatability of the dynamics of recursive systems into the texture of the language with which they are spoken about is complicated by the relational interactions within processes of non-verbal communication that precede the emergence of various ideas within an investigation. In other words, to investigate upon various models of

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[151] "Lilac Wine" was written by James Shelton in 1950, and recorded by many artists including Eartha Kitt, Nina Simone, and Jeff Buckley. The illusory and projective nature of the song retains the same intoxicated and utterly male fantasy at the source of its inspiration: in the 1925 novel *Sorrow in Sunlight* (first published in America as *Prancing N****r*), author Ronald Firbank fantasizes the main character, Miami Mouth, gliding through her party "offering a light, lilac wine, sweet and heady."

relationship, one must be met with a theory of parts and wholes that exist at the boundaries of the literal and symbolic, of recursive systems and difference, as well as "the relation between name and that which is named," with which to begin the endeavour of understanding the implications of an meta-epistemological, non-deterministic science.[152] It is with an ongoing examination of our applications of conscious purpose that we may begin to re-route the habits of control and production that distort the recursiveness of the natural systems we are embedded in, seeking to destroy natural complexity for the sake of an endlessly goal-meeting, optimizing and achieving way of being. The protagonist's double bind of willingly consuming the wine thus *producing himself as the wine's end-product* is my metaphor for the global double bind that industrial capitalism is ensnared in: if it stops its production, it will destroy itself; if it goes on producing it will destroy 'us.'[153] It is from the difference between the production and consumption of lilac wine and the systemic life of the lilac tree that I would like to begin relating an understanding of resonance. Bateson notes that an examination of abductive relatedness would entail some sort of engagement in as paradoxical a process as the initial double bind that poses itself as the central problem. Our task, namely, is to construct a "therapeutic double bind" that creates the space, the 'emergent metasystem' from which to navigate the pathology-on-the-surface. The 'therapeutic double bind' deals with matters of *unconscious* epistemology ("*the how of using our senses"*), where the conscious purpose that stabilizes and secures a conception of 'self' is deeply at odds with

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[152]Alfred Korzybski, *Selections from Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics, 2nd ed.* Institute of General Semantics, 1994 (first published 1948), vii.
Polish mathematician Alfred Korzybski defined "semantic reactions" as the human evaluational responses to verbal and non-verbal stimuli in connection with their personal meanings (i.e. their 'thinking-feeling,' psychological reactions). The relation between the name and that which is named is one of *structure* (a pattern that connects), which he defines as a *body of relations* which are essential factors in the culmination and emergence of meaning. Korzybski's general semantics exemplifies that language, any formulation system is a map of what it purports to represent, and "the map is not the territory." No map represents all of 'its' presumed territory, but at best, maps may be self-reflexive, meaning that we can map our maps indefinitely so that we see the map as a map of the mapmaker, swayed and injured by his or her assumptions, education, experience, etc.

[153] Anthony Wilden, System and Structure: Essays in Communication and Exchange (London: Tavistock Publications, 1972), 394.
Wilden adds this Marxist perspective on such an attempt at self-reflexive, 'irrational' and life-like logic: "The logic of this pathology is that through unlimited expropriation, capital expropriates itself. Through unlimited imposition of order and organization, it drives the biosphere and the sociosphere to disorder and disorganization. Capital thus becomes equivalent to rigidity, to bound energy, to waste; in human affairs capital is the principle of entropy."

the workings of the external world.[154] It is precisely at the moment of double-binding experience that disrupts and shakes our "safe illusions" about the self that we come closer to an awareness of the deep premises that form our perceptual processes, that we can begin to engage in a *habit* of self-reflexivity at the level of our body. We too, will come to notice that we "cannot see clearly" and "feel unsteady," but perhaps we will be more equipped to be ready to accept insights about the self and the world as they emerge. Perhaps, at best, we would come to a recognition that such an experience with lilac wine is not deleterious in itself; yet in the context of an epistemology which is rigid in its acceptance, and thereby pathologizes its existence, the experience of unsteadiness becomes an experience of decadence.

Resonance is the beginning of a vocabulary for a way of conceiving our conceptions and creations *as the record of our observations* of occurrences outside in the world. Bateson has proposed one interpretation of resonance as a process of sensitizing perception towards the interconnectivity of events and ideas through his notion of "*patterns of search,"* the epistemological habits of the participant that may heighten or distort the skein of her recursive activity within the phenomenal world.[155] Bateson would perhaps say that we 'resonate with things' with a learned and preplanned (although largely unconscious) setlist about what resonates with what, in what sort of context, to what sort of consequences, and so on.

The question of whether these resonance pre-exist, becoming subjects only in the mind of the subject that forms the connection, evokes the age-old Kantian and Berkeleyan philosophical toy that asks: '*Is the tree there in the wood when I am not there to see it?*' Yet Bateson argues that because our lives "do not have that objective character which has been a source of reassurance to the natural scientists since the days of Locke and Newton," such thought experiments may have their purpose in an context where such

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[154] Gregory Bateson, "The Birth of a Matrix," in *A Sacred Unity: Further Steps to an Ecology of Mind, ed. Rodney E. Donaldson* (New York: Harper Collins Publishers, 1991), 206.

[155] Gregory Bateson, "The Message of Reinforcement" in *A Sacred Unity: Further Steps to an Ecology of Mind, ed. Rodney E. Donaldson* (New York: Harper Collins Publishers, 1991), 140-141.

play is accustomed but indeed pigeonholes or stagnates the actual patterns of search that attempt to understand the phenomenal world.[156] A more relevant and fruitful frame of inquiry remains to be the "very profound and irresistible 'discovery' that the laws and processes of our perception are at a bridge which joins us inseparably to that which we perceive—a bridge which unifies subject and object."[157] Because science, at best, informs how the contexts in which things are to be observed are constructed, we must take into account how observation itself cannot be detached or isolated from a notion of self-reflexive participation. This means that for anybody who works in the sciences or in the arts, every new discovery and every new advance about the world is *an exploration of the self*—one's own central presuppositions, unexamined beliefs, the personal and cultural kernels of information we take and hold onto as true. This means that the *sort* of information relevant to matters of communication, difference, learning, 'mind,' etc., is only accessible (and therefore potentially useful) through *the quality or relevance of the participating subject's search patterns*, their ability to acquire information at a particularly higher order or level of complexity, and even simultaneously at various levels of complexity. The propositions and premises that the subject 'sees the world' though, believes and therefore acts through and upon, therefore, is namely a matter of *habit formation:* the shared patterns of behaviour and 'programmed' reinforcement of the whole system (the individual in relation to other individuals in a shared context and environment).

If 'scientific discovery' is defined as *a record of an individual's observations in context*, then science itself is nudged towards an embodied enactment of ideas in the phenomenal world. We may begin to see the scientist's ideas as reflections of larger parts and patterns of the world *outside* of the boundaries of her body, which also attempt to venture outside of her immediate intellectual context. Bateson found the search patterns of the scientist's own investigation as synonymous with a responsivity to the "patterns that connect," and

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[156] Gregory Bateson, "Language and Psychotherapy: Frieda Fromm-Reichmann's Last Project" in *A Sacred Unity: Further Steps to an Ecology of Mind, ed. Rodney E. Donaldson* (New York: Harper Collins Publishers, 1991), 245.

[157]Ibid., 246.

framed his lifelong work as a multidisciplinary thinker with this question of search patterns in sync with the world it seeks to know:

> *Break the pattern which connects the items of learning and you necessarily destroy all quality.* […] What pattern connects the crab to the lobster and the orchid to the primrose and all four of them to me? And me to you? And the six of us to the amoeba in one direction and to the back-ward schizophrenic in another? I want to tell you why I have been a biologist all my life, what it is that I have been trying to study. What thoughts can I share regarding the total biological world in which we live and have our being? How is it put together?[158]

Bateson's formulation of this problem attempts to describe and embody an epistemology of a therapeutic double-bind at various scales of experience and 'crisis.' Such an epistemology puts a homological perception of symmetrical and complementary patterns (or "meta-patterns")—located within the inbetweenity of seemingly distinct entities—at the forefront of any investigation of any 'thing,' any part of the whole of the external world. In other words, the "patterns that connect" search for the conscious or unconscious *resonance* between 'things' at various, often overlapping and simultaneous orders, *in order to* perceive and think in accordance to, and perhaps towards the protection of, the systemic nature of the world at large. Bateson's "patterns that connect" asks aesthetic and ethical questions ("*How are you related to this creature? What pattern connects you to it?*") towards an emergent conception of 'self' as a participant in her "*relevance"* to her company, her many contexts and environments.[159]

Bateson further relates his story about "thinking in terms of stories" that draw attention to the necessary entanglement and ongoing concurrence of human 'thinking' and the multi-ordinal organization of the natural world. A man asks his "private large computer" if it

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[158]Gregory Bateson, *Mind and Nature: A Necessary Unity* (New York: E. P. Dutton, 1979), 8.

[159] Ibid., 10.

can ever "think like a human being." The machine then proceeds to print onto a piece of paper, "THAT REMINDS ME OF A STORY." Nested within this story is the central insight of *Mind and Nature*: a notion of 'mind' as the recursive interaction of *any* self-corrective, systemic tautology, in which there is no separation between the eidetic participation of the 'perceiving subject' in the natural world and in their *contexts* in general, the mental-material trajectory of recursive events that one is implicated in. Here, Bateson defines a story as "a little knot or complex of that species of connectedness which we call *relevance,*" and goes on to say: *"*Now I wanted to show that whatever the word *story* means in the story which I told you, the fact of thinking in terms of stories does not isolate human beings as something separate from the starfish and the sea anemones, the coconut palms and the primroses. Rather, if the world be connected, if I am at all fundamentally right in what I am saying, then *thinking in terms of stories* must be shared by all mind or minds, whether ours or those of redwood forests and sea anemones."[160] In this sense, perhaps we can conceive of resonance as a network of stories, gesturing me towards you, connected by nodes of narrative gesturing and communication at increasing scalar complexity. Resonance is the coexistence of multiple metaphors, an act of participating in a process of bringing 'me' outside of 'myself' through *my own* perception of my 'mind' as part of a larger circularity of interwoven metaphors.

Bateson's notion of 'patterns of search' and the 'patterns that connect' in his theory of a natural history of human epistemology and 'mind', however, presupposes a tricky paradox: the ability to obtain information about patterning and redundancy in the world depends upon the subject's particular habits of perception, yet these habits are only formed through the body of experiencing and receiving such information *always at some level removed* from the patterns of redundancies immanent in the environment and material world. In other words, the search patterns of the observer that seek resonance between things must silence or quiet down the noises of its own findings in order to arrive at some kind of 'access point' in the resonating system. Bateson writes: "The

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[160] Ibid.

organism must, if it can, learn to look in the right places, in the right order, for the right sorts of information. Consequently, it is caught in a limited view of the universe by its search patterns, insofar as these are rigidly defined and unchanging. No pattern of the universe which cannot be discovered by these patterns can exist for that organism."[161]

Like lilac wine, my search patterns are inclined to show me what I desire, to give me my own permission to go about life with my habits undisrupted, free from any entanglement in forms of learning that may be difficult and painful. The schizophrenic patient that taught Bateson about the pathological habit of a rigid denial of pathology would wholeheartedly agree, when she said: "If the Russians (Chinese, minorities, hippies, students, etc.) aren't what I think they are, I'll prove it."[162] It is through our search patterns that chords of relation and coherence are able to be heard, and it is also our search patterns that entrap our music in a self-same, unreflexive reproduction of the same old sound. The process of seeking and creating resonance between things, then, requires an understanding at a certain level of complexity of the process of *how* contextual regularities at the level of presuppositions in the mind have been established, and to what end these patterns are then applied to events that occur in life.

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[161] Gregory Bateson, "The Message of Reinforcement" in *A Sacred Unity: Further Steps to an Ecology of Mind, ed. Rodney E. Donaldson* (New York: Harper Collins Publishers, 1991), 141.

[162] Ibid., 145.
Bateson speaks to the schizophrenic process of an ideological paranoia of symmetry, which is related to Freud's reductionist and anti-contextual 'narcissism of minor differences' (Standard Edition, XVIII, 101). As Wilden puts it: "It is a necessary function of pathological communication to deny its own pathology at some level while admitting and using [it] at other levels" (212). The ability to receive information on, and perhaps somehow communicate about the resonances in question, are dependent upon the sort of habits of perception that allow for such observation and communication. The absence or distortion of such habits of perception enables security in its distance separated from the moving chaos of the resonating system.

« ii. Flexibility, stress, and hard-programming »

You are now parting with the food that sustained you—all the secrets and the secret powers—and no other nourishment has yet appeared to replace it. This is the hardest time of all, harder than even your sickness was before you came here. At least that had a meaning for you, as awful as the meaning was sometimes. You will have to trust me enough to take on faith that the new food, when it comes will be richer.

— Frieda-Fromm Reichmann[163]

A theory of resonance requires an awareness that no one person can hear all the messages at once, and that certain sorts and orders of information and redundancy will be more accessible to certain search patterns and yet inaccessible to some. Furthermore, perhaps it is at the very locus of the uneven distribution of information that search patterns are allowed to move, flex out into conversation, participate in a process of entanglement with other search patterns to collaborate on new 'music.' Because I cannot be *moved*, disturbed or changed by what I cannot perceive or become aware of, it is through the very necessity of this unevenness, this 'deafness' to certain patterns, that my "hard programmed" knowledge allows itself to be seduced by some sort of 'otherness.' Bateson has often employed the engineer's terminology of 'programming' towards an understanding of a *flexibility of ideas:* since any social system is comprised of ideas of all logical types, it is an active analysis to those conscious and unconscious ideas that are shared (and deliberately differentiated) in various subsystems of the society that plays a centrifugal force in becoming aware, and therefore attempting to change, the theory and practice of the society at large.

It is this diversity of degrees of generality that determine a "economy of flexibility," which poses a contrast in how repeated, habitual ideas and unfamilar new ideas are "handled" by the mental system, the ecology of ideas of a given society. Bateson writes: "It is commonly the more generalized and abstract ideas that survive repeated use. The more generalized ideas thus tend to become premises upon which other ideas depend.

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[163]Hannah Green, *I Never Promised You A Rose Garden* (New York City: Henry Holt & Co, 1964), 110.

These premises become relatively inflexible."[164] To put this idea in context, the theorist or "ecological analyst" is placed in a double-binding experience of having to push for that which will allow the system a positive budget of flexibility; and on the other hand, having to deal with the people and institutions that "have a natural propensity eat up all available flexibility."[165] The theorist must adhere to the system's current budget of flexibility in his findings for even the potential of them being followed at all; yet the theorist participates in a state of a chronic shortage of the current budget, with more cuts being made by the minute, severing the development of flexibility before it can even begin.[166]

Habit formation in ideas presupposes a *convenience* to their usage; that is, the more inflexible and "hard-programmed" the idea, the more readily and speedily it bends to conscious purpose in a positive feedback loop of unchecked mutual support and self-perpetuation. The evolutionary process of collective epistemology is constitutive of such entangled movement between this "economy of flexibility" and "ecology of mind," where flexibility is defined as an "uncommitted potentiality for change."[167] This may offer accessibility to a mode of perception that is sensitive to the musical relations between things–yet is only possible with a concurrent awareness that denying the existence of flexibility in the phenomenal world in our human practices will instigate

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[164] Gregory Bateson, "Ecology and Flexibility in Urban Civilization," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 510.

[165] Ibid., 505.

[166]As a friend and former teacher once spoke to me, "You participate, as a human being, in this collective tragedy of experiencing the collective tragedy as something simply located in the self. 'Don't get sucked in by bureaucratic process'—but also remember no one anywhere escapes the bureaucracy today, which is written in our hearts, and which no metalogue, however insightful, can be do more than reflect on."

[167]Gregory Bateson, "Ecology and Flexibility in Urban Civilization," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 504-505.
It is also at this interface that Bateson, following the work of Ross Ashby, defines a *biological system* as "the ecological system and the human civilization, and the system which is to be the combination of these two."

pathological consequences for the larger ecology, when enforced and applied with current technology.[168]

Flexibility seeks out deviation in a system and allows for a process of neutralization or correction, characteristic also of the concept of negative feedback that cybernetics has identified as the primary control system of nature. Anthony Wilden's term for such propensity for homeostatic self-sustainment is "renormalization," drawing from biological models of predator-prey relations in simple ecosystems. "Every schoolboy knows" the dyadic relation between the wolf and the rabbit in their shared patch of land, where an increase in the population of rabbits will increase the population of wolves, which in turn eliminate the rabbits to disproportional numbers, which consequently eliminate the wolves. The metaphor of wolves eating the rabbits to their own starvation as "short-range adaptive flexibility" demonstrates an absence of flexibility and renormalisation in the limited environment, necessarily resulting in a "long-range counter-adaptive inflexibility."[169] This principle of counter-adaptivity is derived in the biology of evolution, but Wilden demonstrates its resonance within psychosocial or socioeconomic systems. At the levels of individual psychopathology *and* biosocial human maladjustment, the errors of "short-range adaptive flexibility" engender pathology at the level of 'long-range,' hard-programmed ideas about relating and communicating—often towards a surplus of *stress* in the whole system. This reminds us to consider that Wilden's model of short-range adaptive flexibility as demonstrated in the binary model of the wolf and rabbit is situated within a much more complex, multiple and entangled model that is

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[168] Ibid., 498-499.
Bateson believed that an idea, if believed in by enough people with enough certainty and met with enough technical execution, will be able to produce cataclysmic 'by-products' in the biosphere at large. To paraphrase his model of "Dynamics of Ecological Crisis": unchecked growth of population, technology, and "hubris"—belief in dominance over self, other, and planetary ecology—interconnects and accelerates into epiphenomena of famine, pollution, and war. "…The bigger the population, the faster it grows; the more technology we have, the faster the rate of new invention; and the more we believe in our 'power' over an enemy environment, the more 'power' we seem to have and the more spiteful the environment seems to be." Human industrial growth has and will continue to expand, and eat what is left of planetary ecology. It seems, then, an increasing expansion of economic 'freedom' is utterly entwined with an increasing reduction of epistemological 'wisdom.' See fig. 1.

[169] Anthony Wilden, *System and Structure: Essays in Communication and Exchange* (London: Tavistock Publications, 1972), 206.

the ecology. The whole system does not only account for the rabbit or the wolf, or any singular species or population, but the oak tree that the rabbit finds shelter in, the fungi that nourishes the tree, the bear or mountain lion that feast upon the wolf, the carbon or soil pollution that affects the life of the whole forest, and so on. Stating the seemingly obvious fact of entangled ecology leads to a consideration of a much less obvious one: that of the intertwined precarity of adaptation, especially with human complicity increasingly at the forefront of altering the homeostatic balance of the ecological whole. Wilden writes: "The 'security operation' of madness is an adaptation to an intolerable environment—whether that environment be the family context, the value system of a particular culture, or social conditions—and it has at least short-range survival value. It is the beginning of the 'cure.' But if the 'madman' cannot *break through at another level*, his adaptation may be insignificant as far as his 'environment' is concerned…Worse, however, may be the situation in which his adaptation is essential also to the survival of the 'environment' which made him 'lose his marbles,' as they say, in the first place."[170] Short-range 'solutions' that are akin to eating the next rabbit in sight, such as alcohol, hallucinations, pesticides, shopping, and burning fossil fuels only become counter-adaptive and pathogenic when the context (which is always an epistemological structure) is wired towards increased deviation, runaway, and atomistic separation of mind from body. A context that constantly sends the message of blame to wolves for eliminating both the rabbits and themselves, or the schizophrenic for creating her own hallucinatory world, or the individual for global ecological destruction, the systemic, entangled, and profound nature of the problem will remain shrouded in murk.

What the larger epistemology is unable to approach are the reasons for the adaptive adjustment in the first place, or, that which was 'once' an adaptive adjustment to a pathological pattern or painful situation. Efforts to alleviate a problem at a heightened moment of desperation (for health, for prosperity, for 'normalcy,' for love, etc.), then, is recontextualized as a (by)product of the same pathological pattern that it sought to escape. It is through an epistemology of cybernetics that Bateson describes the nature of

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[170] Ibid.

addiction as an attempt at *correction* of a present situation of discomfort or anguish. The state of drunkenness offered by the bottle is precisely what allows the individual to "become again a part of the human scene," experiencing *a total shift in epistemology* as his pain is reduced by the physiological and psychological warmth offered by the drink.[171] Those who experience chronic pain will attest to the jarring, life-altering moment of experiencing its absence (or perhaps interpreting the bifurcation point of excess stress as 'absence'). What is monstrous and pathogenic, however, is the individual's perception of alcohol itself as a 'thing' separated from his body, that may enter in it and grant him a sense of 'sanity' through his intoxication: through the belief of a separation of his mind and body, what he is confronted with is not the dissonance and dissociation inherent in that concept, but a feeling of having his anxieties and despair uplifted in a state of fuzzy murk, a comforting sense of belonging in the here and now, and so on. What the individual becomes 'addicted' to, then, is not the drink itself but the *symmetrical relationship of dependency* with the substance that allows security in his hard programmed premises of individuated self-control, that grants him a sense of 'self' through an alleviation of the pain and confusion of being at odds with a larger system. Bateson identifies the myth of 'willpower'—the belief that one can 'defeat' and maintain control over one's relationship with the substance—as serving only to escalate and reinforce the positive feedback loop of pathogenic dependency by activating just enough *discomfort* to increase the behaviour which preceded the discomfort, *i.e.*, to fall back into the same old pattern of drinking. In other words, what was to provide flexibility of behaviour or mental state in the painful context only becomes programmed to escalate and strengthen it, to feel 'at home' within messages of the impossibility of renormalization: the absence of a corrective control system, a conception of balance or moderation altogether. The double-binding premise of being a separated, self-contained and sustained individual that rightly possesses the power to give himself 'a little something' to go about his world 'now and then,' also operates as the premise of his own destruction. The more 'fundamental' the premise, however, the more 'fundamental' the

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[171]Gregory Bateson, "The Cybernetics of Self: A Theory of Alcoholism," *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 329.

effects of the change in the world. Bateson writes: "If a man achieves or suffers change in premises which are deeply embedded in his mind, he will surely find out that the results of that change will ramify throughout his whole universe. Such changes we may well call 'epistemological.'"[172]

Determining the kind of epistemological shift that 'breaks through at another level' of the original bind as a task for the individual to perform with their 'innate strength' or willpower only reproduces the original bind. To indeed 'break through at another level,' we must begin from enlarging the visibility of the scale of the bind's processes and ramifications, to see them deliberately at a collective scale that is often obscured by the everyday illusion of 'individual' problems. Perhaps, then, we can go so far to say that any shift in the hard-programming of our ideas may involve change in the whole skein of relations at the level of the most basic cultural ideas of what is called a 'civilization.' Thomas S. Kuhn wrote of "paradigm shifts" in 1962 amidst a general boom of individuals in moving towards similar directions in questioning fundamentalism in science, in a *paradigmatic turn* towards recognizing that a state of flexibility and 'non-use' differs from a state of "hard-programmed" commitment. This is largely because the concept of a "paradigm" provides the epistemological framework for the members of a scientific discipline to learn (or refuse to learn) the constructed and compounded, personal and contextually learned nature of the beliefs that they espouse. The originality of Kuhn's formulations was to put a *personal* historico-epistemological emphasis on the acceptance and maintenance of 'normal science': simultaneously by external social need and an internal agenda, the structure of the scientific field itself (its theory and practice) is constructed as a hub for the scientist to increasingly accommodate their work to the existent paradigm, and to perform 'mopping up operations,' maintenance duties necessary to continue to exist in the preformed and relatively inflexible space that the paradigm supplies, no matter how secure. In other words, what the schoolboy is taught is not to follow a flux of knowledge but to know and master a paradigm, which mainly functions to prepare the schoolboy for "*membership* in that particular scientific community within

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[172] Ibid., 336.

which he will later practice."[173] Because of such membership that the schoolboy 'invested' his whole youth to obtain, and because he will participate in a pattern of relationships with men who have obtained their positions by adhering to the same models, his practices in the present and future will seldom, if not never, dare to tread in the land of overt disagreement about his 'fundamentals.'

Yet the 'fundamental' question that Kuhn asks through his analysis of normal science, and therefore the emergent possibility of scientific revolution, resonates with Bateson's problem of *suffering* change in one's deepest premises: "*What beliefs about the stars, for example, does he bring to the study of chemistry or electricity?* Which of the many conceivable experiments relevant to the new field does he elect to perform first? And what aspects of the complex phenomenon that then results strike him as *particularly relevant* to an elucidation of the nature of chemical change or electrical affinity?"[174] It is precisely at the point of painful entanglement of personal presuppositions and collectively shared messages about scientific-epistemological development that one begins to understand every description as necessarily partial, that no personal or natural history can be interpreted without a body of methodological beliefs permitting selection, emphasis, and storytelling, and that it is precisely from the parts that are *omitted* from and by one's methodological beliefs that the important resonations and connections emerge.

« iii. the observer-participant »

"Oppositions are not subject to the logic of exclusion, but to that of participation*, of which exclusion is in any case a variant."*

— Louis Hjelmslev[175]

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[173] Thomas S. Kuhn, *The Structure of Scientific Revolutions*, fourth ed. (Chicago and London: The University of Chicago Press, 2012), 11.

[174] Ibid., 4 (my emphasis).

[175] Anthony Wilden, *System and Structure: Essays in Communication and Exchange* (London: Tavistock Publications, 1972), 418.

The notion of resonance I have begun to offer here is an effort to communicate *the urgent necessity of complicating our patterns of search.* I have attempted to demonstrate that this task is entwined with the process of cultivating an economy of flexibility in the structure of our language, which may engender a fluency for complexity in articulating the complexities of the social and global scale problems that we face. With resonance comes a sensitivity to 'strange attractors' that preludes new generalizations, organization, and relationships, navigating the emergent fractal structures of participation from which we may diverge but never quite depart. Resonance may then help to construct a metaphor of intervention as a model with which to see the dialogic emergence of cultural presuppositions, and their ongoing interchange in the formation of our organizational policies and institutions.

Furthermore, such a metaphor, which proclaims observance as inseparable from interwoven participation alongside and with that which is observed, provides a persistent reminder for the present moment of Bateson's famous statement: "Science never proves anything."[176] This primary premise that 'every schoolboy knows' repeats the 'simple' truth that a linear, positivistic way of explanation does not work, and our capacity to explain things depends upon our ability (which is possible only within contexts that allow the ability) to reach for relations, to make connections in 'non-obvious' places, and to extend awareness of the inescapable reality of having to operate inside structures endlessly overlapping. Tolly Holt's description of 'occurrence systems' during the 1968 conference in Burg Wartenstein on the effects of conscious purpose on human adaptation, as documented by Mary-Catherine Bateson, provides a branching out of the metaphor of knowledge as situated *between* overlapping occurrences, which may aid in the difficult understanding of the structure of epistemological change. Holt arrives at a potent metaphor for resonance in his description of participants as parts of the whole that is a musical event, sifting through a space where 'strange attractors' are abundant and new chords of knowledge are therefore able to emerge:

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[176]Gregory Bateson, *Mind and Nature: A Necessary Unity* (New York: E. P. Dutton, 1979), 27.

> Anyway, can you imagine a kind of music that really has concurrence? Where there is a whole lot going on concurrently, which nevertheless is aesthetic and has musical relation, but no one observer can hear it all at once? If he could, it wouldn't be concurrence. And all you can do at any one time is to focus on some part. Perhaps you can imagine being able to wander in this musical web. You could turn knobs or something to move about in this space. And indeed, a number of people could wander about in this space and perhaps even meet each other there.[177]

In an occurrence system, it is precisely at the locus of one's *in*ability to experience the whole that one can begin to navigate it, that allows for the space for navigation in the first place. An awareness of such limitations keeps the system from becoming static, sustaining and continuously stimulating the concurrent nodes of resonance, of musical relation. Although the social sciences are increasingly studying the type of nonlineal, bifurcating, and recursive system that allows for the movement of 'strange attractors' as demonstrated by this occurrence model, what remains murky is the difficulty to 'visualize,' to actually *resonate with* the often abstract language of chaos, fractal structures, and resonance. The language used to describe individual and collective scales of larger disordered processes beyond immediate understanding and control may in fact provide more obstacles towards their understanding.

It is by epistemological error that individuals and social systems fall into disturbing, often painful double-binds, and it is in response to these epistemological errors *at a collective scale* that the study of nonlinearity and complexity must begin. To sense the importance of music and vibration in what is done in scientific fields, to conceive of the premises of my individual struggle not as a byproduct of self-damning pathology, and to understand the destructive search patterns of conscious purpose by which invested groups deny and therefore destroy systemic complexity at social and ecological scales, are all

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[177]Mary Catherine Bateson, *Our Own Metaphor: A Personal Account of a Conference on the Effects of Conscious Purpose on Human Adaptation* (Washington: Smithsonian Institution Press, 1991), 300.

parts of the whole resonating system that embeds and connects the orchid and the primrose, the amoeba and the schizophrenic, me to you, and so on, into a larger resounding unity.

Concurrence entails experiencing the kinds of complexities that emerge from the whole *immanent in oneself*, and it is to such realization that resonance within occurrence systems begins to hold in the 'real world.' As Mary Catherine Bateson writes: "Every person is his or her own metaphor… The possibility of seeing something, the possibility of talking about it, and probably the possibility of loving, depend in every case arriving in yourself at a comparable complexity."[178] 'I' am my own metaphor that brings me closer to an understanding of that which I failed to understand with staunch intention; it is 'your' very existence that embodies that which you are trying to speak about in a language that can only exist at some level of a double-bind. And the beliefs about some part of the world that each of us bring to examinations of other parts of the world, that precise moment of overlap and difference, may be the moment where 'you' and 'I' meet. What Bateson partially meant by describing information as "a difference that makes a difference" is perhaps to emphasize this fact of *encounter*, of concurrence, in the communicative contexts that produce and reproduce what is thought to be known.[179] This means that a restriction of search is necessary, but these restrictions can be various and many, as various and many as the emergent facets of one's 'self' participating in interacting, adaptive being.

Yet the people that we may meet in any one occurrence system will come into the system with *their* own metaphors. The fact of a different metaphor for any different interlocutor is perhaps the greatest insight and task that the vocabulary of resonance and the efforts to translate complexity will have to contend with. The possibility of knowledge as a rhythmic process that encounters the vibrations of other rhythmic processes in a polyphonic meeting of information and metaphors and ideas remains an unknown,

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[178] Ibid., 285.

[179] Gregory Bateson, "Form, Substance, and Difference" in *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 458-459.

perhaps even a fantasy as intoxicating as lilac wine 'on a cool damp night.' Yet, as Isabelle Stengers articulates, "although it does not yet have the ability to be 'considered,' must mark the way we present the present."[180] In other words, it is towards a confirmation not of what we think to already know, but the "incomplete access to the complexity that we are," that we 'handle' ideas with aesthetic sensibility in their layered contexts, rather than by compulsion to arrive at a destination, consuming the object of knowledge in hand.[181] Amidst the many things that theory cannot do (cure illness, restore natural ecologies, change people's minds, etc.), it may, at best, provide a trajectory or sense of direction in becoming cognizant of the reverberating implications, causations, and consequences of such problems. What must be said, with the immanent fear of seeming to relinquish care, is that allowing for such venture to reverberate at a scale that is capable of marking the way we present the present is a task too unstable and unfolding, too systemic, for one theorist's attempt at an abstract goal of 'success.' From here, Adrienne Rich provides some words from which we may begin: "Until we can understand the assumptions in which we are drenched we cannot know ourselves."[182]

The interface between different search patterns and the phenomena it attempts to 'seek' is possible, perhaps, only through a necessary process of *participation*. What must remain in awareness is that the word "participation" may evoke a muddled and often primitivist idealization of a kind of pastoral, 'pre-logical' immanence to human practices and affairs, which will be insufficient and erroneous for the task at hand. We are compelled, then, to describe "participation" within a domain of language, the fact of multi-scalar variety in communicating about the relationship within which communication takes place; that is, the *metacommunication* about the other who speaks and gestures towards the self, and vice versa. Such an understanding of participation may be seen in relation to analogic communication and therefore *an analogic structure of thought* contrasted to the digital.

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[180] Isabelle Stengers, *Cosmopolitics I*, trans. Robert Bononno (Minneapolis: University of Minnesota Press, 1997), 79.

[181] Mary Catherine Bateson, *Our Own Metaphor: A Personal Account of a Conference on the Effects of Conscious Purpose on Human Adaptation* (Washington: Smithsonian Institution Press, 1991), 288.

[182]Adrienne Rich, "When We Dead Awaken: Writing as Re-Vision," *College English* 34, no. 1 (1972): 18.

This contrast clarifies the difference between using conventional signs (*i.e.* numbers, verbal words) to name a connection and the emergent quality of gesturing towards the connection through participating in the relationship at a non-verbal level. In Bateson's own words, the difference between the digital and the analogic can be thought of as so:

> Verbal language is almost (but not quite) purely digital. The word "big: is not bigger than the world "little"; and in general there is nothing in the pattern (i.e., the system of interrelated magnitudes) in the word "table" while would correspond to the system of interrelated magnitudes in the object denoted. On the other hand, in kinetic and paralinguistic communication, the magnitude of the gesture, the loudness of the voice, the length of the pause, the tension of the muscle, and so forth—these magnitudes commonly correspond (directly or inversely) to magnitudes in the relationship that is the subject of discourse.[183]

Within perception, if considered as the process that unites the participants of a communicative exchange, the fruit of that participatory observation will first and foremost resonate at the scale of each one's body. The messages-gestures emergent and exchanged in participation can be seen as structures and models of the very soma they have originated from. A rudimentary digitalization of the analog, however, may include a process of viewing the dynamics and behaviour of analogic communication with digital categories of analysis which can produce erroneous and often detrimental outcomes to the participants. For example, the therapist obsesses on utilizing the verbal, literal words of the schizophrenic patient to determine what is going on, she will only create a context of communicating the inability to establish a basis of mutual understanding and respect. She must be able to communicate that there is nothing hallucinogenic about cultural and social context, about the inability to voice one's pain, while being aware that to state it in

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[183]Gregory Bateson, "Problems in Cetacean and Other Mammalian Communication" in *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 373-374.

words as such may never suffice. Likewise, to apply a theory of logical types or abstraction to the way in which dolphins communicate would say nothing about the dolphins at all; and so it is to the danger of such a muddling of understanding that observation is seen without a concept of participation, of immanent engagement as part of a dynamic system of relationships. As Bateson further remarks, however: “In the natural world, communication is rarely either purely digital or purely analogic.”[184] Digitalization is an inevitable, primary process in nature—as Bateson assumes genotypic variation to be purely digital—which has recently turned out not to be quite so simple (*i.e.* epigenetics), and which means that it may function or be ‘programmed’ towards maintaining a general analog relation. The survival of an ecosystem as a whole requires, to some extent, names and words with which to navigate its processes. At the scale of human biosocial problems, some processes of digitalization of the analog may, at best, cultivate a flexibility and sensitivity towards the “magnitude of the gesture” of various ecological scale disasters, the "loudness of the voice” of social imbalance.

Bringing a notion of participation to the forefront of our search patterns, with an understanding of the complexities of communication that participation must exist within, emphasizes a ‘unity of subject and object’ that emerges with the dissolution of the destructive premise of the separation of mind and body. If all meaning is irrelevant without context and human personality unknowable outside of interpersonal relationships, if I carry my beliefs about the stars into the investigation I am conducting in my intellectual playground, and if we indeed are “our own metaphor,” there cannot be a notion, or even an illusion of externality or ‘proven’ objectivity and truth in our formulations. Bateson writes that an arrival (which is also an encounter) at such understanding “leads to a very profound and irresistible discovery that the laws and processes of our perception are *a bridge which joins us inseparably to that which we*

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[184]Gregory Bateson, “The Logical Categories of Learning and Communication” in *Steps to an Ecology of Mind* (San Francisco: Chandler Pub. Co., 1972), 291.

perceive—a bridge which unites subject and object."[185] Perception *is* the participatory process that connects the observer with what is observed. Respective of the desire to know an external 'thing' is the desire towards language, of all communicative gestures emerging from a human body, entangling itself in a complex range of phenomena and relationships. Participation, then, comes to explain experiences within communicatively engaged and self-organized systemic-semiotic systems. Perhaps participation is itself a qualitative matrix of collectively shared experiences that connects the patterns of how the 'self' meets another in their search, attesting to the very fact of recursive connectedness that allows for such possibility.

It is from a logic of participation that perception is understood as involved in a meta-level process of communicating about the nature of the sort of communication that allows for a mutual participation in communication in the first place. This includes the fact of unknowing, an inaccessibility to the whole of what is going on, as a factor of unity or flexibility in systems, providing the space unfilled by conscious purpose to 'relieve the stress,' so to speak, of its demands. Resonance, then, occurs as a *duration* of the inheritance of conceptual structures in ongoing encounter with the traces of experience, the duration required for learned ideas and behaviours to match and meet with the strangeness that it is perpetually confronted as a fact of life. And perhaps it is to these durational patterns that science must cultivate a responsivity, if only to brush up against the vast untranslatability of resonant patterns with its previous or present vocabulary. As Bruno Latour asks, with some risk of losing oneself in the infinite: "How could we be chilled by the cold breath of the sciences, when the sciences are hot and fragile, human and controversial, full of thinking reeds and of subjects who are themselves inhabited by things?"[186]

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[185] Gregory Bateson, "Language and Psychotherapy—Frieda-Fromm Reichmann's Last Project" in *A Sacred Unity: Further Steps to an Ecology of Mind, ed. Rodney E. Donaldson* (New York: Harper Collins Publishers, 1991), 245 (my emphasis).

[186] Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, Mass: Harvard University Press, 1993), 115.

The vibrations of certain resonances may contribute to the creation of new forms, patterns, and pulsations in the most general, yet multi-scalar sense of how we do things. 'Emergence' is a word that has undergone much repetition throughout this chapter, in an attempt to emphasize the phenomenon of metacommunicational arrival by way of relationship. It is to also to the premise that the communicationality of a system may not be, and really most never is, equal to its linguistic forms, that resonance may be understood. That is, from the emergent noise of a system that resonance can be seen as fostering, or is constitutive of, circularities of deferred and indirect difference may resound a chance for us to approach new or revised premises with which relate with the world.

From this place, I would like to conclude with a loving and resonant reminder that Gregory offered me throughout my time with this project, and 'just living' at other scales of my life:

> The fabrics of interaction are going to be torn and they're going to mend.
> And after all, we are only a model of what we are trying to talk about,
> and it would be absolute nonsense to try to construct that model as
> though it did not contain the tearings of fabric.[187]

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[187]Mary Catherine Bateson, *Our Own Metaphor: A Personal Account of a Conference on the Effects of Conscious Purpose on Human Adaptation* (Washington: Smithsonian Institution Press, 1991), 293.

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